REGULATING A PSEUDONYM

Namibia's Regulatory Response to Cross-Border Cryptocurrency Transactions

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ABSTRACT

In 2008 the world witnessed a transformational shift in its financial services with the introduction and subsequent adoption of cryptocurrencies. The self-regulatory nature of cryptocurrencies is an attractive feature for its users. Unfortunately, this feature is equally as attractive for criminal use. It is for this reason that in 2018 the Financial Action Task Force amended its regulatory Recommendations to extend the obligations of anti-money laundering and combating the financing of terrorism to cryptocurrency service providers and users. In turn, jurisdictions such as the European Union have amended their anti-money laundering laws to give the Recommendations effect.

However, cryptocurrency transactions are presently unregulated in Namibia, despite the country also being a member state of the Financial Action Task Force. Namibia's concerns surrounding cryptocurrencies are in no way limited to their ability to corrupt the integrity of its financial industry, but also their ability to evade Namibia's capital and exchange controls. These controls preserve Namibia's foreign reserves which can theoretically be under threat by pseudonymous cross-border cryptocurrency transactions. Consequently, the imminent threat which these transactions pose, in their current form void of regulation, can arguably be quantified by their lack of transparency, accountability, and their jurisdictional concerns.

Notably, cryptocurrencies have the ability to lower the entry level for financial inclusion and have the potential to propel Namibia's economic growth if cultivated correctly. Therefore, this dissertation examines whether the licensing of cryptocurrency service providers within Namibia can remedy the ills that plague cross-border cryptocurrency transactions, in order to safeguard the integrity of Namibia's financial industry and ensure the preservation of its foreign reserves without stifling innovation.

I. CHAPTER 1: INTRODUCTION

It is globally accepted that an economically stable country should have a central banking system.[1] Namibia, as a sovereign country,[2] provides in Article 128 of its Constitution[3] for a central bank, namely the Bank of Namibia (Bank). To execute the operations traditionally entrusted to central banks.[4]

The core operations include ensuring monetary and financial stability.[5] As such, the Bank is responsible for safeguarding the solvency of Namibia.[6] This is done by the preservation of Namibia's foreign reserves through capital and exchange controls, and further implementing robust monetary policy mechanisms.[7] The monetary policies implemented by the Bank are in line with that of the Common Monetary Area (CMA),[8] which comprises of South Africa,[9] Namibia,[10] Lesotho and eSwatini.[11] The Agreement that established the CMA requires its member states to have moderate monetary policy autonomy.[12] It is for this reason that Namibia anchors its foreign exchange rate with the South African Rand.[13] This arrangement requires Namibia to ensure that the value of its fiat money (money) is guaranteed by foreign reserves,[14] which the Bank regulates robustly.

Another important regulator for the purpose of this dissertation is Namibia's Financial Intelligence Centre (Centre)[15] which is entrusted with combatting money laundering and the financing of terrorism.[16] As signatory to the United Nations Convention against Transnational

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[1] Vera C. Smith *The Rationale of Central Banking and the Free Banking Alternative* Liberty Press, England (1936) 3.
[2] 'Sovereignty' is the monopolist authority of a country to self-govern within its geographical territory, according to John Dugard SC et al *Dugard's International Law: a South African Perspective* 5 ed (2018) 210. There is no differentiation in the ranking of countries' sovereignty see, Article 2(1) of the United Nations Charter.
[3] The Constitution of the Republic of Namibia, 1990, as amended (Constitution).
[4] Article 128 of the Constitution.
[5] Section 3(a) of the Bank of Namibia Act 15 of 1997, as amended. (Bank of Namibia Act).
[6] Section 3(a) of the Bank of Namibia Act.
[7] Bank of Namibia Website 'Bank of Namibia Monetary Policy Framework' (2008) ISBN: 99916-61-50-6 at 2 available at *https://www.bon.com.na/Bank/Monetary-Policy/Monetary-Policy-Framework.aspx* accessed on 21 June 2019.
[8] *Ibid.*
[9] International Monetary Fund (IMF) 'Annual Report on Exchange Arrangements and Exchange Restrictions' (2018) vii.
[10] *Ibid.*
[11] *Ibid.*
[12] Bank of Namibia op cit note 7 at 2.
[13] Bank of Namibia op cit note 7 at 3. IMF op cit note 9 at 10.
[14] Bank of Namibia op cit note 7 at 2.
[15] Established in terms of s 7 of the Financial Intelligence Act No. 13 of 2012, as amended (Financial Intelligence Act).
[16] In terms of s 9 of the Financial Intelligence Act.

Organized Crime 2000, Namibia actively regulates and criminalises money laundering and terrorism financing using three key legislation.[17]

Nevertheless, the advancements within the digital environment, like cryptocurrencies[18] have progressed at a speed that has left regulators in low- and middle-income countries battling to remain abreast with them.[19] These countries could benefit the most from these technological advancements,[20] because they decrease costs and facilitate the execution of services that have not been realised or were otherwise hindered by conventional industries.[21]

It is, however, important to remain mindful of the inherent risks that plague these technological advancements such as cryptocurrencies. The risks that will be examined for the purpose of this dissertation are, the evasion of Namibia's anti-money laundering and combating the financing of terrorism (AML/CFT) laws, as well as its capital and exchange controls and whether it is possible to regulate cryptocurrencies through licensing to limit these risks.

The regulation of cryptocurrencies has received a considerable amount of scholarly attention. Amongst these are, Nicola Ann Harvey who argues that cryptocurrencies should be classified as money in South African law.[22] This dissertation builds on Harvey's compelling argument. While Hossein Nabilouhas advocated for indirectly regulating cryptocurrency through its service providers.[23] Karabo Mothokoa and Mildred Melina Gomachas make a similar argument for South Africa,[24] Kenya and Nigeria,[25] respectively

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[17] Financial Intelligence Act, Prevention and Combating of Terrorist and Proliferation Activities Act No. 4 of 2014, as amended and Prevention of Organised Crime Act 29 of 2004, amended. For the purpose of this dissertation emphasis will be placed on the Financial Intelligence Act.

[18] Susan Alkadri 'Defining and Regulating Cryptocurrency: Fake Internet Money or Legitimate Medium of Exchange?' (2018) vol.17 no.1 *Duke Law & Technology Review* 71 defines cryptocurrencies as 'decentralized virtual currencies utilizing a "cryptographic protocol that manages the creation of new units of the currency through a peer-to-peer network'. While Lexico defines cryptocurrency as 'a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank' *Oxford Dictionary*, available at *https://www.lexico.com/en/definition/cryptocurrency*, accessed on 12 August 2019. This dissertation will use the term cryptocurrency as it builds on the assumption that the legal classification of cryptocurrencies should be that of money as oppose to an asset.

[19] Sephooko I. Motelle 'The Race of Innovation in Financial Services and the Regulatory Chase: Some Thoughts on the Regulation of Crypto-Currencies' (2017) vol. 3 no.4 *Development Finance Agenda* 8.

[20] Vera Songwe 'A Digital Africa' June 2019 vol. 56 no. 2 Finance & Development 1 available at *https://www.imf.org/external/pubs/ft/fandd/2019/06/digital-africa-songwe.htm* accessed on 21 June 2019.

[21] *Ibid*.

[22] Nicola Ann Harvey *The Legal Classification of Cryptocurrency in South African Law: An Argument for Classification as Currency* (unpublished LLM thesis, University of Cape Town, 2019).

[23] Hossein Nabilou 'How to Regulate Bitcoin? Decentralized Regulation for a Decentralized Cryptocurrency' (2019) *International Journal of Law and Information Technology*.

[24] Karabo Mothokoa *Regulating Crypto-currencies in South Africa: The need for an effective Legal Framework to mitigate the associated risks* (unpublished LLM thesis, University of Pretoria, 2017).

[25] Roswitha Mildred Melina Gomachas Cryptocurrency Intermediation In Africa: Towards A Regulatory Framework For Cryptocurrency Intermediaries (unpublished LLM thesis, University of the Western Cape, 2018).

While Byron Titmas recommends the regulation of cryptocurrencies in South Africa in terms of the Electronic Communications and Transactions Act 25 of 2002.[26]

Moreover, the Financial Action Task Force (FATF) has provided Recommendations[27] and a subsequent Guidance for the regulation of cryptocurrencies service providers,[28] however, the FATF limits its guidance to a purely AML/CFT perspective. While the paper by Raphael Auer and Stijn Claessens argue that although cross-border cryptocurrencies are decentralised they rely on the financial industry and as such can be regulated.[29] This dissertation is thus novel in that it examines the oversight in terms of cross-border cryptocurrency regulation from a Namibian perspective.

(a) Principal Research Question and Research Objective

This dissertation has two interlinked research questions. First, can cross-border cryptocurrency transactions be regulated in Namibia? If affirmative, what provisions should feature in Namibia's regulation for cross-border cryptocurrency transactions, in order to secure the efficacy of such regulation? Therefore, this dissertation intends to propose a regulatory framework for cross-border cryptocurrency transactions for Namibia. This will be done by critically evaluating whether the licensing of cryptocurrency service providers (service providers) in Namibia can remedy the ills that plague cryptocurrencies. Such ills include, pseudonymous transacting, jurisdictional concerns and evasion of laws which may in theory result in the depletion of Namibia's foreign reserves and the use of the financial industry for illegal purposes. As such, the laws that will be examined are those relating to capital and exchange controls as well as AML/CFT laws. In providing the framework for Namibia's cross-border cryptocurrency regulation, an appropriate balance will be struck between fostering innovation while at the same time safeguarding the integrity of Namibia's financial industry and preserving its foreign reserves.

(b) Assumptions

In order to facilitate the discussion in this dissertation, it will deploy two interlinked assumptions. First, although cryptocurrencies do not have intrinsic value such as gold, they

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[26] Byron Titmas *Regulating Bitcoin in South Africa: a Comparative Study* (unpublished LLM thesis, University of the Cape Town, 2019).

[27] Financial Action Task Force (FATF) 'International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation' (June 2019) (FATF Recommendations).

[28] FATF 'Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (June 2019) (FATF Guidance).

[29] Raphael Auer & Stijn Claessens 'Regulating Cryptocurrencies: Assessing Market Reactions' (September 2018) *BIS Quarterly Review.*

nevertheless have value,[30] even if that value is purely speculative. Therefore, for the purpose of this dissertation cryptocurrencies will be considered to have value.

The second assumption is that the legal classification of cryptocurrencies is that of money. Namibian legislation provides a definition for legal tender which is money minted or printed under the authority of the Bank.[31] As such, cryptocurrencies fall short of legal tender status in Namibia. Until recently cryptocurrencies could have been classified as 'foreign currency'[32] in terms of the Exchange Control Regulations.

However, late last year the Bank of Namibia Bill[33] was passed which was gazetted on the 4th February 2020.[34] And awaits commencement from the Minister of Finance. The Bank of Namibia 'Bill' defines 'currency'[35] as '… a note or coin issued by the Bank and includes any note or coin which is legal tender in Namibia.'[36] This definition expressly excludes any possible interpretation that a decentralised cryptocurrency can be money in Namibia.

Consequently, this change in law arguably places cryptocurrencies within the regulatory sphere of the Namibia Financial Institutions Supervisory Authority who is responsible for regulating non-banks in the financial industry.[37] Nevertheless, this dissertation recommends and therefore assumes that cryptocurrency should be considered as foreign money in Namibia.[38] This assumption is further supported by Italy's Inland Revenue which also considers cryptocurrencies as foreign money in its *Resoluzione* N72/E of the 2nd September 2016.

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[30] See European Banking Authority Opinion on 'Virtual Currencies' EBA/Op/2014/08 (4 July 2014) that 'defines virtual currencies as a digital representation of value' 11.
[31] In terms of s 20 of the Bank of Namibia Act 15 of 1997, as amended (Bank of Namibia Act). In terms of s 26 of the Bank of Namibia Act the South African Rand is also legal tender in Namibia.
[32] Foreign currency is defined as 'any currency which is not legal tender in the Republic and includes …any other instrument for the payment of currency payable in a currency unit which is not legal tender in the Republic', in terms of s 1 of the Exchange Control Regulations, 1961 (Exchange Control Regulations) issued under s 9 of the Currency and Exchanges Act 9 of 1933 (Exchange Control Act).
[33] Bank of Namibia Bill B. 1 – 2019 (Bank of Namibia Bill). Notably, digital transactions in Namibia will have an improved legal footing with the passing and subsequent operation of the Electronic Transactions Bill B2 – 2019 which was passed in 2019 but awaits an effective date.
[34] Government Gazette No. 7109.
[35] Paragraph 1 of the Bank of Namibia Bill.
[36] Bank of Namibia Bill s*upra.*
[37] Section 3(a) of the Namibia Financial Institutions Supervisory Authority Act 3 of 2001, as amended.
[38] See also Harvey op cit note 22.

(c) Relevance of Study

As Namibia is an upper-middle-income country,[39] and its economy is still in recession since June 2016.[40] Coupled further with the fact that a considerable amount of money was lost recently in the misappropriation of money by a local commercial bank,[41] it is reasonable to conclude that Namibia does not have a surplus of foreign reserves to shield its economy from large unregulated outflows of money. Equally so, Namibia's modest economy cannot afford to compromise the integrity of its financial industry.

This dissertation argues that cross-border cryptocurrencies have the ability to evade Namibia's laws and may in theory deplete Namibia's foreign reserves and compromise the integrity of its financial industry. To ensure Namibia remains solvent it is pertinent to have appropriate regulation to mitigate the risks associated with cross-border cryptocurrency transactions and further discourage their use for illegal purposes in Namibia.

(d) Research Methodology

This dissertation was conducted as a desktop-research which evaluated and relied on purely textual data in the form of legislation, regulations, Bills, online resources, newspapers, textbooks, journals, case law, white papers, green papers and policy documents. Therefore, it amounts to a doctrinal analysis which included elements of comparative analysis and policy considerations.

(e) Research Limitations

Given the ever-evolving nature of the law, and even more so that of technology, this dissertation is limited to the present state of law and technology at the time of writing it in June 2019 until January 2020. Accordingly, this dissertation does not discuss the pending changes to the Bank of Namibia Act (the gazetted Bank of Namibia 'Bill') that has not yet commenced.

Moreover, this dissertation is limited to cryptocurrency regulation in the geographical territory of Namibia, unless the context indicates the contrary. Although this dissertation includes an element of financial regulation, while important, the tax implications of cross-border cryptocurrency transactions fall outside the ambits of this dissertation.

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[39] The World Bank Website 'Namibia at a glance' available at *http://www.worldbank.org/en/country/namibia/overview* accessed on 21 June 2019.

[40] Bank of Namibia website 'Namibia Financial Stability Report Bank of Namibia and NAMIFISA' (April 2019) 16 available at *https://www.bon.com.na/Bank/Financial-Stability/Financial-Stability-Reports.aspx* accessed on 21 June 2019.

[41] See *Bank of Namibia v Small & Medium Enterprises Bank Ltd and Others* (3) 2018 1 NR 193 (HC).

(f) Structure of Dissertation

Chapter one is an introductory chapter. Thereafter, chapter two evaluates from a policy perspective why Sub-Saharan Africa, particularly Namibia should favourably consider regulating cryptocurrencies. This is done by evaluating the current economic stance of Sub-Saharan Africa and proposing methods in which the digital environment and its technologies, distinctly cryptocurrencies can remedy such stance by providing opportunities for sustainable economic development and lowering the entry level for financial inclusion in remote parts of Sub-Saharan Africa.

Chapter three conducts a comparative analysis between the centralised model of cross-border financial regulation in Namibia versus the self-regulatory, decentralised cryptocurrency network. This is done in order to assess whether the current legislation is able to regulate cryptocurrencies or if amendments are required. Chapter four evaluates the rationale for the implementation of AML/CFT laws as well as capital and exchange controls. Then it turns to a comparative analysis on selected countries namely, South Africa, Rwanda, South Korea, New York in the United States of America, and the European Union to examine how they regulate, if at all, cross-border cryptocurrency transactions. The comparative analysis informs the discussion of Namibia's regulatory framework for cross-border cryptocurrency transactions.

Chapter five proposes a multitiered regulatory framework to ensure harmonisation amongst jurisdictions by means of a model law. The chapter then details the essential provisions Namibia's cross-border cryptocurrency regulation should contain to ensure the integrity of its financial industry and the preservation of its foreign reserves. Chapter six proposes recommendations for the realisation of the proposed regulation of cross-border cryptocurrency transactions in Namibia based on the discussion from the previous chapters. Thereafter, chapter seven provides concluding remarks.

II. CHAPTER 2: A POLICY DISCUSSION ON THE REGULATION OF CRYPTOCURRENCIES IN SUB-SAHARAN AFRICA

In a bid for the law to remain relevant, due consideration should be given to public policy, because a stagnant legal system could inevitably lose its efficacy. This chapter evaluates the rationale behind regulating cross-border cryptocurrency transactions. Due to the novelty and intricacies of these transactions this evaluation will be done from a legal policy perspective as opposed to a black letter law analysis.

A brief analysis will be done on the current economic stance of Sub-Saharan Africa,[1] as consideration for the economy is pivotal in a policy discussion that seeks to build on such economy with the aid of the digital environment and its ensuing technologies. Thereafter, a comparison will be done to evaluate the advantages and disadvantages of utilising the digital environment particularly cryptocurrencies to propel Sub-Saharan Africa. This chapter will also investigate the current shortcomings of exploiting the full potential of the digital environment and advocates for Namibia to regulate cross-border cryptocurrency transactions.

a) Analysis of Sub-Saharan Africa's Economy

The region is of rich cultural diversity and has vast natural resources, however, it is also riddled with poverty, political unrest, lack of infrastructure, natural disasters, unemployment, and debilitating sovereign debt, to mention but a few of the socio-economic shortcomings. These conditions are amongst the reasons for the region's full potential being unrealised. Despite the declining economic development in Sub-Saharan Africa of 2.5 per cent and 2.3 per cent in 2017 and 2018,[2] respectively. The population in the region has nevertheless increased.[3] This adds further strain to the struggling economy. The declining economic growth is attributed to various reasons. Such as the low oil exports from Angola and Nigeria which are caused by the instability of the international oil sector,[4] and the intermittent withdrawal of international investments from South Africa[5] on account of a lack of business confidence.[6]

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[1] Interchangeably referred to as the 'region'. As this dissertation seeks to provide Namibia's regulatory framework for cross-border cryptocurrency transactions, this chapter will narrow its focus to Namibia, while having due regard for the region within which it is located.

[2] World Bank Group 'An Analysis of Issues Shaping Africa's Economic Future' (April 2019) 19 *Africa's Pulse* 1.

[3] *Ibid.*

[4] World Bank Group op cit note 2 at 19.

[5] *Ibid*.

[6] *Ibid.*

While natural disasters in countries such as Mozambique[7] and Namibia[8] are equally as taxing on the underperforming economy.

The trade-related conflicts between powerhouse economies,[9] such as the United States of America (USA) and China further hinders trade with Sub-Saharan Africa[10] which is caught in the middle of this power struggle. It therefore comes as no surprise that more than 40 per cent of the region's population lived in life-threatening poverty in 2015.[11] Although recent predictions show mild improvements in parts of the region[12] there is still cause for concern. As the overall estimated growth for the region is underwhelming at 2.8 per cent and 3.3 per cent for 2019 and 2020,[13] respectively. With the present underperforming economy, Sub-Saharan Africa would most likely still be plagued with life-threatening poverty until 2030.[14] In order to resuscitate this underperforming economy, it would require collaboration within the region[15] with multidimensional policy reforms[16] to enhance its resilience.[17] Such policy reforms include capitalising on the digital environment.[18]

[7] World Bank Group op cit note 2 at 11. Jeff Wicks 'Nearly 500 Dead in Mozambique in Wake of Cyclone Idai' Sunday Times 25 March 2019 - 16:24 available at *https://www.timeslive.co.za/news/africa/2019-03-25-nearly-500-dead-in-mozambique-in-wake-of-cyclone-idai/* accessed on 20 June 2019.
[8] Recent droughts in Namibia resulted in its President declaring a state of emergency. See Government Gazette No. 14 *Declaration of State of Emergency: National Disaster (Drought): Namibian Constitution* 6 May 2019.
[9] World Bank Group op cit note 2 at 21.
[10] *Ibid*.
[11] United Nations *The Millennium Development Goals Report* (2015) 15.
[12] See Prinesha Naidoo 'IMF Sees Namibia Growing in 2020 After Three-Year Contraction' (13 September 2019) *Bloomberg* available at *https://www.bloomberg.com/news/articles/2019-09-13/imf-sees-namibia-growing-in-2020-after-three-year-contraction* accessed on 29 January 2020.
[13] World Bank Group op cit note 2 at 19.
[14] World Bank Group op cit note 2 at 24. While countries such as Namibia had envisioned to economically stable by 2030, see Government of the Republic of Namibia (Namibia Vision 2030 Policy) Framework for Long-Term National Development (2004) 38.
[15] World Bank Group op cit note 2 at 57.
[16] World Bank Group op cit note 2 at 24.
[17] *Ibid.*
[18] *Ibid.*

b) Advantages of utilising the Digital Environment

The digital environment has vast potential,[19] if cultivated correctly it can stimulate economic growth in the region.[20] Its technologies provide a more efficient manner of transacting[21] and progressively reduces the costs associated with such transactions.[22] Therefore, digital technologies ensure that the financial industry remains competitive[23] and ever evolving with customers' needs. These needs can include providing swift credit facilities to small and medium-sized enterprises in Sub-Saharan Africa who are unable to meet their credit needs.[24]

This is particularly relevant because efforts to enhance financial inclusion in the region still warrant further attention as attempts to lower the entry level to the banking sector[25] have not yielded the returns hoped for. Estimations hold that out of 590 million adults in the region,[26] 350 million are unbanked.[27] One of the main reasons for this is that it is economically unfeasible to erect a physical bank in a desolated area of the region.[28] Which leaves a large portion of the population unaccounted for in the conventional banking sector, as statistically 82 per cent of the population still lives in rural areas.[29]

In recent years more than half of the world's mobile telephone banking was conducted in the region.[30] The use of digital technologies has increased the number of bank accounts within

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[19] In countries such as Rwanda and Kenya blockchain technology are being used to digitise land registration, see Kevin Mwanza 'Kenyan Lawyers Wrangle with Government over Land Registry Digitization' Jared Ferrie (ed) *Thomson Reuters Foundation (*7 May 2018) available at *https://www.reuters.com/article/us-kenya-landrights-idUSKBN1I81K1*, accessed on 14 August 2019. While Namibia has largely streamlined and digitised its litigation documents, see Namibia e-Justice User Guide for Service Bureau 1 *CrimsonLogic* (20 May 2016) 5 available at_ *https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=2ahUKEwih-taWqoLkAhVSKFAKHfZwC-QQFjABegQIBBAC&url=http%3A%2F%2Fwww.ejustice.moj.na%2FHigh%2520Court%2FRegisterAndReports%2FRegisterAndReports%2FNamibia%2520eJ%2520Service%2520Bureau%2520User%2520Guide%2520v1.pdf&usg=AOvVaw04lRgrTgJi2Rzz4ok74Eik*, accessed on 14 August 2019.

[20] World Bank Group op cit note 2 at 3.

[21] World Bank Group op cit note 2 at 72.

[22] Vera Songwe 'A Digital Africa' (June 2019) vol. 56 no. 2 *Finance & Development* 29.

[23] Sephooko I. Motelle 'The Race of Innovation in Financial Services and the Regulatory Chase: Some Thoughts on the Regulation of Crypto-Currencies' (2017) vol. 3 no. 4 *Development Finance Agenda* 8.

[24] European Investment Bank 'Digital Financial Inclusion in sub-Saharan Africa' *Africa Conference Paper, Day 6* (July 2017) at 5. Digital technologies also allow SMEs to engage in trade on a global platform and obtain exposure from such platform, Department of Communications *A Green Paper on Electronic Commerce for South Africa* (2000) 15.

[25] Bank of Namibia 'Introducing the Basic Bank Account' available at *https://www.bon.com.na/Education/Basic-Bank-Account-Brochure.aspx* accessed on 14 August 2019.

[26] European Investment Bank op cit note 24 at 2.

[27] *Ibid.*

[28] *Ibid*.

[29] World Bank Group op cit note 2 at 81.

[30] European Investment Bank op cit note 24 at 3 and Moses Mozart Dzawu 'Sub-Saharan Africa has more Mobile-Money Accounts than anywhere else in the World' (13 August 2019) *Monwyweb* para 7 available at *https://www.moneyweb.co.za/news/tech/mobile-phones-are-replacing-bank-accounts-in-africa/* accessed on 14 August 2019.

the region by 10 per cent from 2011 to 2014.[31] The solution to financial inclusion in the region may in part be the accessibility of such services by means of digital technologies.[32] Capitalising on such technologies can afford low-income countries access to digital financial inclusion at a minimal cost.[33] Amongst these novel digital technologies is the use of cryptocurrencies as a method of payment. Cryptocurrencies can even the playing fields in the region by offering world-class financial services[34] swiftly[35] and at a fraction of the cost.[36]

In addition, the self-regulating blockchain technology of cryptocurrencies offer cryptocurrency users (users) financial services that are relatively free from theft and manipulation.[37] This striking feature is particularly attractive in a region that is susceptible to corruption. Another attraction of cryptocurrencies is that they are relatively immune to political and economic instability.[38]

c) Disadvantages of utilising the Digital Environment

Amidst the potential advantages the digital environment offers they are nevertheless plagued with imminent risks, especially in the absence of regulatory supervision. In an attempt to shelter customers many central banks have issued warning statements discouraging the use of

[31] European Investment Bank op cit note 24 at 3.
[32] TymeBank, South Africa's first entirely digital bank has noticed this gap and seeks to reach the under-serviced market, see TymeBank's Website available at *https://www.tymebank.co.za/#* accessed on 12 August 2019.
[33] *Ibid*.
[34] Department of Communications op cit note 24 at 15.
[35] Ireland's Department of Finance 'Discussion Paper: Virtual Currencies and Blockchain Technology' (March 2018) at 22. As such academics have advocated for a global settlement system underpinned by blockchain technology, see Claire Schupmann 'Blockchain as an Emerging Cross-Border Payments Infrastructure' (2017) Emerging Scholars Paper 28 *Institute of International Law and Justice* at 5. At a sub-regional level, the use of cryptocurrencies within an appropriate regulatory framework can expedite the cross-border settlements of the *SADC Real-Time Gross Settlement System*, see Bank of Namibia *Annual Report* (2018) 36. The efficiency offered by cross-border cryptocurrency transactions may also enhance commercial transactions within the continent, as an aid to the objectives of the African Union, detailed in its African Continental Free Trade Area Agreement in terms of Article 6.
[36] Schupmann op cit note 35 at 6. The high costs associated with conventional banking have in recent times been subjected to scrutiny, see Hilton Tarrant 'Discovery Bank's Complex Pricing' (13 August 2019) available at *https://www.moneyweb.co.za/moneyweb-opinion/columnists/discovery-banks-complex-pricing/*, accessed on 14 August 2019. Another cost saving factor of cryptocurrencies is that they do not require the production costs of minting and printing unlike fiat money, see Steven Levy 'E-Money (That's What I Want)' Wired (1994) para 9 available at *https://www.wired.com/1994/12/emoney/* accessed on 22 June 2019.
[37] Ireland's Department of Finance op cit note 35 at 22. Arvind Narayanan et al *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction* (2016) at 2 and 34. Jerry Brito and Andrea Castillo 'Bitcoin: A Primer for Policymakers' (2013-2014) vol. 29 no. 4 *Policy* 4. Andrea O'Sullivan 'Ungoverned or Anti-Governance? How Bitcoin Threatens the Future of Western Institutions' (2018) vol. 71 no. 2 *Journal of International Affairs* 90.
[38] Staff Writer 'The Rand Is Now the Worst-Performing Currency in the World: Analyst' (12 August 2019) *BusinessTech https://businesstech.co.za/news/finance/334137/the-rand-is-now-the-worst-performing-currency-in-the-world-analyst/* accessed on 14 August 2019.

cryptocurrencies.[39] The self-regulating blockchain technology that underpins cryptocurrencies hinders their co-existence with the conventional banking sector.[40] Coupled with the fact that users have the ability to transact on an international scale pseudonymously, void of any regulatory constrains is extremely appealing to users who seek to use cryptocurrencies for illicit transactions.[41] Similar concerns about the lack of regulatory supervision were raised by the USA House Committee on Financial Services about the proposed cryptocurrency of the Libra Association which is not subjected to any effective regulatory supervision.[42] Particularly because it is in part a Facebook initiative[43] and Facebook has in the past raised serious concerns about the violation of customer's rights amongst other concerns.[44]

Cross-border cryptocurrency transactions have also attracted the attention of the G20 who now seek to gain an understanding of the technical workings of cryptocurrencies and their implications to 'monetary sovereignty'.[45] In 2011 the World Bank flagged Namibia's

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[39] Bank of Namibia 'Bank of Namibia Revised Position on Cryptocurrencies' (May 2018) para 3.1 available at *https://www.bon.com.na/.../Bon/.../9ab34d1a-07d7-45b3-859a-6e51814d690b.pdf* accessed on 21 June 2019, and Central Bank of Kenya 'Banking Circular No 14 of 2015 (Virtual Currencies – Bitcoin)' paras 1 - 2 available at *https://www.centralbank.go.ke/policy-procedures/legislation-and-guidelines/circulars/* accessed on 14 August 2019. See also European Banking Authority (EBA) 'Opinion on Virtual Currencies' EBA/Op/2014/08 (4 July 2014) 23 available at *https://www.eba.europa.eu/.../EBA-Op-2014-08+Opinion+on+Virtual+Currencies.pdf* accessed on 22 June 2019. South African Reserve Bank Website Virtual Currencies/ Crypto-currencies available *athttps://www.resbank.co.za/RegulationAndSupervision/FinancialSurveillanceAndExchangeControl/FAQs/Pages/VirtualCurrenciesCryptocurrencies.aspx* accessed on 20 September 2019. Central Bank of Kenya 'Banking Circular No 14 of 2015 (Virtual Currencies – Bitcoin)' paras 1 - 2 available at *https://www.centralbank.go.ke/policy-procedures/legislation-and-guidelines/circulars/* accessed on 14 August 2019. Reserve Bank of Zimbabwe 'Circular to Banking Institutions NO. 2/2018: Virtual Currencies - 15 May 2018' para 5*(a)-(b)* available at *https://www.rbz.co.zw/index.php/regulation-supervision/regulation-supervision/guidelines-circulars-and-public-notices-3/499-circular-to-banking-institutions-no-2-2018-virtual-currencies* accessed on 20 September 2019.

[40] Hossein Nabilou 'How to Regulate Bitcoin? Decentralized Regulation for a Decentralized Cryptocurrency' (2019) *International Journal of Law and Information Technology* 9.

[41] The Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 (5th AML Directive) paras 2 and 4. Financial Action Task Force (FATF) 'Report to the G20 Finance Ministers and Central Bank Governors' (July 2018) para 9 available at *www.fatf-gafi.org/publications/fatfgeneral/documents/fatf-g20-april-2019.html* accessed on 21 June 2019. See United States Court of Appeals, Second Circuit, in *United States of America, Appellee, V. Ross William Ulbricht, A/K/A Dread Pirate Roberts, A/K/A Silk Road, A/K/A Sealed Defendant 1, A/K/A Defendant-Appellant* 1. Reuters and Rob Price 'Authorities in US indicts alleged Russian money-laundering 'mastermind' *Business Insider* behind $4 billion bitcoin exchange' 26 July 2017 available at *https://www.businessinsider.com/us-indicts-alexander-vinnik-alleged-operator-btc-e-money-laundering-2017-7?IR=T* accessed on 22 June 2019.

[42] U.S House Committee on Financial Services 'Examining Facebook's Proposed Cryptocurrency and Its Impact on Consumers, Investors, and the American Financial System' (17 July 2019) *Webcast of the Hearing* available at *https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=404001* accessed on 12 August 2019.

[43] The Libra Association Members *An Introduction to Libra: White Paper* (23 July 2019) 4.

[44] U.S House Committee on Financial Services 'An Examination of Facebook and Its Impact on the Financial Services and Housing Sectors' (23 October 2019) *Webcast of the Hearing* available at *https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=404487* accessed on 25 October 2019.

[45] G20 Press Release on Global Stablecoins (18 October 2019) Washington DC available at *http://www.g20.utoronto.ca/2019/2019-g20-finance-stablecoins.html* accessed on 28 January 2020. The Financial Stability Board will be assisting the G20 by investigating cryptocurrencies and thereafter reporting their findings to the G20 in April 2020. The report will include, whether the current regulatory framework effectively addresses

susceptibility to illicit money because it is geographically bordered by two corrupt countries,[46] namely South Africa and Angola.[47] These concerns have only been exacerbated by pseudonymous cross-border cryptocurrency transactions that lack accountability because they are not regulated. In the absence of regulation, users are exposed to cybersecurity risks,[48] consumer protection uncertainties,[49] and volatile cryptocurrency investments.[50]

Cryptocurrencies have also been criticised as having nothing to do with the unbanked at the current rate they are trading.[51] The overall digital environment may be out of reach for many countries in Sub-Saharan Africa,[52] including Namibia. In 2016, the World Bank recorded that 52.38 per cent of Namibia's population still lives in rural areas.[53]

These areas often have limited or no internet coverage and no devices compatible with cryptocurrency transactions. Even if they did, it is highly unlikely that the population in those areas would know how to use those devices to transact with cryptocurrencies.[54] A discussion on the disadvantages of digital technologies and their environment cannot be concluded without mentioning the possibility that such technologies may result in certain jobs becoming

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the concerns surrounding cryptocurrencies, particularly cross-border concerns. And further advising the G20 on whether additional regulation is required to adequately address concerns relating to global financial stability and systemic risk, see Financial Stability Board G20 Regulatory issues of stablecoins (18 October 2019).

[46] Stuart Yikona, et al 'Ill-gotten Money and the Economy: Experiences from Malawi and Namibia / Financial Market Integrity' (2011) *Finance and Private Sector Development* The World Bank 61 and 71.

[47] *Ibid.*

[48] See Riaan Grobler 'City of Joburg shuts down all Systems after Cyber attack demanding Bitcoin Ransom' (25 October 2019) *News24* available at *https://www.news24.com/SouthAfrica/News/city-of-joburg-shuts-down-all-systems-after-cyber-attack-demanding-bitcoin-ransom-20191025* accessed on 26 October 2019. It is for this reason that the African Union stresses the importance of cybersecurity in its *Convention on Cyber Security and Personal Data Protection*, however national regulation in this regard lags behind. For instance, the Central Bank of Kenya has issued mere guidelines to its financial industry to be mindful of cyber risks and mitigate against cyber breaches see, Central Bank of Kenya 'Guidance Note on CyberSecurity' (2017) para 2.1 available at *https://www.centralbank.go.ke/policy-procedures/legislation-and-guidelines/circulars/* accessed on 14 August 2019. While other central banks seem to have failed to recognise the risk associated with the digital environment.

[49] See Lisa Kramer 'Regulations Needed after Cryptocurrency CEO Takes Passwords to His Grave' (4 April 2019) Marketplace Global Game-Changers at 21 available at *http://theconversation.com/regulations-needed-after-cryptocurrency-ceo-takes-passwords-to-his-grave-112759* accessed on 21 June 2019. Emily Crane 'Regulation Without Deflation: Cryptocurrency and its Insider Trading Conundrum' (2018) vol. 51 *The John Marshall Law Review* 798.

[50] Brito and Castillo op cit note 37 at 3.

[51] Asress Adimi Gikay 'Regulating Decentralized Cryptocurrencies Under Payment Services Law: Lessons from European Union Law' (2018) vol. 9 *Journal of Law, Technology & the Internet* 3.

[52] Even though the United Nations has recognised the right to access the internet in Article 19(b) of the Universal Declaration of Human Rights, and the International Covenant on Civil and Political Rights. See Frank La Rue 'Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression' United Nations General Assembly Human Rights Council (16 May 2011) Seventeenth Session Agenda Item 3 *A/HRC/17/27* at 7. Nevertheless, this right is out of reach for majority of the region, as in 2018 only 27 per cent of the region had access to the internet, see World Bank Group op cit note 2 at 81.

[53] Trading Economics 'Namibia - Rural Population' available at *https://tradingeconomics.com/namibia/rural-population-percent-of-total-population-wb-data.html* accessed on 23 June 2019.

[54] Gikay op cit note 51 at 3.

redundant. This is a concern in most parts of Sub-Saharan Africa, where the population lacks the technical skills to occupy new jobs created by digital technologies.[55]

d) Shortcomings in exploiting the Full Potential of the Digital Environment

If cultivated properly by regulation the potential benefits of the digital environment and its technologies, including cryptocurrencies, can pave the way for sustainable socioeconomic development in Sub-Saharan Africa.[56] Which arguably outweighs the associated risks. Therefore, it is imperative that the region provides an appropriate policy response[57] which strives to encourage innovation while remaining mindful of the ever-present risks.[58] A policy position which seeks to ban or simply ignore digital technologies such as cryptocurrencies, may inevitably increase the digital divide.[59] And may be rendered ineffective, when faced with 'regulatory arbitrage'[60] as these transactions are facilitated with the aid of the internet making them accessible from virtually anywhere in the world.[61] Attempts to ban cryptocurrencies may arguably result in users transacting on illegal platforms[62] or using a more favourable country to facilitate their cryptocurrency transactions.[63]

It is for this reason that this dissertation advocates for regulatory reforms that harness the full potential of cross-border cryptocurrency transactions, while remedying or at the very least mitigating the associated risks. This dissertation argues that the greatest stumbling block to exploiting the full potential that cryptocurrencies offer, is the lack of regulation.[64] Because of

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[55] Sarah Harford 'Digitalisation Could Lead to Nearly 50,000 Job Losses: Here is Why the Government Isn't Worried' *FORA* (11 December 2018) available at *https://fora.ie/digital-transformation-ireland-4385694-Dec2018/* accessed on 21 June 2019. The ripple effects of digitisation is already noticeable in the financial industry, Tjipenandjambi Kuhanga 'Banking sector to shed 1 800 jobs' *The Namibian* 19 February 2019, reported that the banking sector intends to retrench redundant employees as their services have been replaced by internet banking, available at *https://www.namibian.com.na/185946/archive-read/Banking-sector-to-shed-1-800-job* accessed on 18 September 2019.

[56] World Bank Group op cit note 2 at 81.

[57] World Economic Forum *The Global Risks Report* 11 ed. (2016) 42 and *Ibid.* G20 *Global Partnership for Financial Inclusion Digital Financial Inclusion: Emerging Policy Approaches (*July 2017) 15.

[58] G20 op cit note 57 at 11.

[59] G20 op cit note 57 at 4.

[60] Victor Fleischer 'Regulatory Arbitrage' (4 March 2010) *SSRN* 3. 'Regulatory arbitrage' can be understood as the exploitation of a more favourable regulatory environment when there are discrepancies between two regulatory environments, as such the gap between the two is exploited.

[61] Nabilou op cit note 40 at 10.

[62] Nabilou op cit note 40 at 5.

[63] *Ibid*.

[64] The banking sector, for example, has distanced themselves from cryptocurrencies amidst the uncertainty of the risks and their associated obligations, see Jamie McKane 'FNB shuts down South African cryptocurrency-linked bank accounts' (19 November 2019) *MyBroadband* available at *https://mybroadband.co.za/news/cryptocurrency/328355-fnb-shuts-down-south-african-cryptocurrency-linked-bank-accounts.html* accessed on 24 November 2019. Percival Soko 'One of "Big Five" Banks in South Africa is Withdrawing its Services to Crypto Exchanges' (22 November 2019) *Tech Financials* available at

the borderless nature of the digital environment,[65] including cryptocurrencies, it is for the benefit of all countries that their policy responses be harmonious.[66]

Once regulated, infrastructural needs must be addressed[67] which includes access to the internet,[68] at a competitive price,[69] and a stable source of electricity.[70] Capacity building is also required by the upscaling of skills.[71] As such increasing digital literacy[72] and financial literacy[73] in the region. This is necessary to ensure that regulators are competent to effectively regulate cryptocurrencies, and further to address users' 'technophobia'[74] in the region.

In striking an appropriate balance between fostering innovation and risk mitigation, this dissertation argues that cross-border cryptocurrency transactions can be regulated, even if this is only done in part at this stage. As such, Namibia's regulatory framework for cross-border cryptocurrency transactions should include the following essential provisions: (1) a licensing procedure[75] for service providers which also subjects users to regulation,[76] for both commercial and non-commercial cryptocurrency transactions. (2) Regulatory supervision[77] that removes pseudonyms, and subjects service providers and users to effective supervision.[78] (3) The implementation of preventative measures such as reporting obligations on service providers and customer due diligence.[79]

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https://techfinancials.co.za/2019/11/22/one-of-big-five-banks-in-south-africa-is-withdrawing-its-services-to-crypto-exchanges/ accessed on 24 November 2019.

[65] Songwe op cit note 22 at 29.

[66] *Ibid*. Harmonisation in the digital sphere is vital because, 'new technologies such as the internet have effectively eliminated national borders on the information highway and these poses inherent problems of jurisdiction and enforcement', see Department of Communications op cit note 24 at 12. In *Jafta v Ezemvelo KZN Wildlife* 2008 JOL 22096 (LC) a South African labour court reiterated the same sentiments stating that digital transactions are borderless and therefore require harmonisation for effective regulation, paras 56-7.

[67] Department of Communications op cit note 24 at.4 and World Economic Forum op cit note 57 at 42.

[68] World Bank Group op cit note 2 at 3.

[69] World Bank Group op cit note 2 at 49.

[70] World Bank Group op cit note 2 at 52.

[71] World Bank Group op cit note 2 at 3 and World Economic Forum op cit note 57 at 42.

[72] Western Sydney University states that 'digital literacy' can be understood as the ability to navigate and use various digital technologies available at *https://www.westernsydney.edu.au/studysmart/home/digital_literacy/what_is_digital_literacy* accessed on 10 August 2019. See also Antonio Calvani et al 'Models and Instruments for assessing Digital Competence at School' (September 2008) vol. 4 *Journal of e-Learning and Knowledge Society* 185.

[73] G20 op cit note 57 at 4.

[74] MC Clarke 'Technological Experience and Technophobia in South African University Students' (August 2000) no. 25 *South Africa Computer Journal* 14.

[75] The Financial Action Task Force (FATF) *Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers* (June 2019) (FATF Guidance) para 6.

[76] FATF Guidance op cit note 75 para 8.

[77] FATF Guidance op cit note 75 para 6.

[78] *Ibid*. G20 op cit note 57 at 15.

[79] *Ibid*.

(4) Ensuring that all cryptocurrency transactions are subjected to the law. Which will in turn ensure that the regulation of cross-border cryptocurrencies is 'technologically neutral'[80] by subjecting them to the same legal requirements as those of conventional cross-border transactions. (5) Addressing jurisdictional concerns for cross-border cryptocurrency transactions that involved Namibia.

In summary, digital technologies like cryptocurrencies offer Sub-Saharan countries such as Namibia the ability to propel its economy, if cultivated properly. For that reason, this dissertation advocates for the regulation of cross-border cryptocurrencies transactions as they have the potential to lower the entry level of financial inclusion and with the appropriate regulation associated risks can be remedied or mitigated, for the most part. Against this backdrop chapter three will evaluate how the traditional centralised model regulates conventional cross-border transactions, in comparison to how the self-regulatory cryptocurrency network facilitates cross-border cryptocurrency transactions. This will be done in order to determine whether current regulation can address the concerns raised by cross-border cryptocurrencies or if amendments to the law is required for effective regulation.

[80] Rajab Ali 'Technological Neutrality' (2009) 14(2) *Lex Electronic* 2. 'Technology neutrality' can be understood as a non-discriminatory interpretive provision that ensures that digital technologies are placed on equal footing as their paper-based counterpart. Moreover, the United Nations Commission on International Trade Law's Convention on The Use of Electronic Communications in International Contracts, states that the same set of laws should apply to digital technologies as with their paper-based counterpart, regardless of the format or technology used for such digital transactions (2007) Preamble para 5.

III. CHAPTER 3: A COMPARATIVE ANALYSIS OF THE CENTRALISED MODEL OF CROSS-BORDER FINANCIAL REGULATION VERSUS THE SELF-REGULATORY CRYPTOCURRENCY NETWORK

In order to provide an appropriate regulation for cross-border cryptocurrency transactions which seeks to ensure that such transactions are executed in conformity with Namibia's AML/CFT laws and capital and exchange controls, it is important to conduct an evaluation of the current regulation of cross-border transactions. This evaluation is essential in order to determine whether current regulation can appropriately address the concerns raised by cross-border cryptocurrency transactions or if there is a need for amendments to the law.

This exercise will require a comparative analysis of the theoretical differences between the centralised regulatory model of cross-border transactions compared to the self-regulating cryptocurrency network. By further drawing from the current cross-border regulations of the Bank and the Centre. This will be compared to the operations of Bitcoin, as an example of a cryptocurrency and its self-regulatory cryptographic technology. The use of technical terminology will be limited to the degree required for the purpose of this dissertation.[1]

a) The Centralised Regulatory Model

(i) Capital and Exchange Controls

In Namibia, the movement of money and the acquisition of foreign money is heavily regulated with the imposition of capital and exchange controls. These controls are implemented when natural and juristic persons wish to engage in a financial transaction outside of the CMA.[2] The regulation of cross-border transactions is entrusted to the Ministry of Finance as 'Treasury'[3] who has appointed the Bank as its agent to administer such regulations on its behalf.[4]

The Bank has in turn licensed authorised dealers (ADs)[5] to assist in the administration of the Exchange Control Regulations. Along with foreign exchange bureaus,[6] who are known as

[1] Hossein Nabilou 'How to Regulate Bitcoin? Decentralized Regulation for a Decentralized Cryptocurrency' (2019) *International Journal of Law and Information Technology* 2.
[2] Bank of Namibia Manual for Individuals' (28 September 2018) Version number 1.0 Circular number 01//2018 (Manual for Individuals) 31. Bank of Namibia 'Currency and Exchanges Manual for Businesses' (18 September 2018) Version number 1.0 Circular number 01//2018 (Manual for Businesses) 13.
[3] In terms of s 1 Exchange Control Regulations.
[4] In terms of s 46 of the Bank of Namibia Act, read in conjunction with the Currency and Exchanges Act and Regulation 22E of the Exchange Control Regulations. Bank of Namibia *Annual Report* (2018) 42.
[5] Regulation 2 (1) of the Exchange Control Regulations. Manual for Individuals' op cit note 2 at 4, Manual for Businesses op cit note 2 at 8.
[6] Manual for Individuals op cit note 2 at 4.

authorised dealers with limited authority (ADLAs).[7] Having granted such authorisation to ADs and ADLAs the Bank supervises their operations to ensure compliance with the Exchange Control Regulations.[8]

The fundamental premise of the Exchange Control Regulations is that cross-border transactions require prior approval[9] or exemption[10] from the Bank. For instance, the acquisition and disposal of foreign money is restricted to such approval.[11] The production of a positive identification document is one of the prerequisites to obtaining the approval.[12] The identity of a natural or juristic person is paramount for ensuring accountability for the enforcement of the Exchange Control Regulations and other laws in general.

Foreign money obtained through the Exchange Control Regulations may only be used for the purposes for which such approval was sought.[13] Therefore, any surplus thereof must be resold to an AD within the prescribed period.[14] In terms of its delegated authority the Bank also has the power to monitor and regulate foreign assets that Namibian residents have claim to.[15] In addition, persons departing from Namibia are required upon request of an officer,[16] to disclose whether they have local or foreign money in their possession[17] and produce supporting documents.[18] The same applies to persons entering Namibia.[19]

Notably, South Africa and Namibia have the same Exchange Control Regulations and Exchange Control Act.[20] Therefore, their regulation of capital and exchange controls are for the most part identical.[21] Interestingly, the South African Constitutional Court in *South African*

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[7] Manual for Individuals op cit note 2 at 4 and 9. Manual for Businesses op cit note 2 at 8 and 13.
[8] In terms of Regulation 19(1)-(2) of the Exchange Control Regulations.
[9] For instances, Regulation 10(1)(c) places limitation on taking money outside of Namibia without such authority. Similar provision are included in Regulations 2(1), 3(1), 4(4)(b) and (d), 4(7), 6(5), 6(6), 7(2), 8(1), 9(1), 11(1), 12(4), 13(1), 14(1), (4)- (5), 15(4)-(5), 16(1) and (5)-(6), 22A(1)(b)-(c), 22C(2) and 23(2) of the Exchange Control Regulations.
[10] In terms of Regulations 3(1), 3(3)(b)(i), 3(6)(b)(i), 4(8), 5(2)(a), 6(7) and (10)(a), 7(3), 15(6)(a)-(b), 16(2)(a)-(b) of the Exchange Control Regulations.
[11] In terms of Regulation 2(1), Regulation 2(2)(a), Regulation 2(3), Regulation 2(4)(a) and Regulation 5 of the Exchange Control Regulations.
[12] Manual for Individuals op cit note 2 at 10-13 and 20. Manual for Businesses op cit note 2 at 32 and 61.
[13] In terms of Regulation 2(4) of the Exchange Control Regulations.
[14] In terms of Regulation 2(5) of the Exchange Control Regulations.
[15] In terms of Regulation 7(1) of the Exchange Control Regulations.
[16] In terms of Regulation 3(3) of the Exchange Control Regulations.
[17] In terms of Regulation 3(3) of the Exchange Control Regulations.
[18] In terms of Regulation 3(6)(b)(i)-(ii) of the Exchange Control Regulations.
[19] In terms of Regulation 3(6) of the Exchange Control Regulations. Similarly, s 36 of the Financial Intelligence Act also requires disclosures of cash exceeding a determined threshold, for persons entering and exiting Namibia.
[20] Article 140 of the Constitution validates laws that were in force before Namibia gained its independence, unless later repealed.
[21] The Exchange Control Regulations in the CMA are for the most part identical.

Reserve Bank and Another v Shuttleworth and Another[22] declared s 9[23] of the Exchange Control Act constitutionally invalid.[24] This judgment was based on the premise that the President, as 'Governor-General'[25] does not have original legislative powers.[26] More so, the Ministry of Finance and the South African Reserve Bank performing some of the 'Governor-General['s]'[27] duties in terms of s 9 of the Exchange Control Act is likewise invalid,[28] as s 9(1) of the said Act does not provide for sub-delegation.[29] In order for Namibia to shield itself from the same constitutional challenges faced in *Shuttleworth* it is advisable for the National Assembly to rather pass the Exchange Control Regulations.

(ii) Anti-money Laundering and Combating of Terrorism Financing

Ensuring compliance with Namibia's AML/CFT laws is simply too voluminous for the Centre alone, therefore certain preventative measures[30] and reporting obligations[31] are placed on 'accountable institutions'[32] to assist with this task in the operations of their businesses. ADs and ADLAs are also classified as accountable institutions.[33]

Section 34 of the Financial Intelligence Act extends these legal obligations to electronic cross-border transactions.[34] Although the Centre sought to extend its regulatory scope to the digital environment by regulating 'electronic money',[35] the Financial Intelligence Act and its subsequent Regulations fail to define the term electronic money.[36]

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[22] *South African Reserve Bank and Another v Shuttleworth and Another* 2015 (8) BCLR 959 (CC) (*Shuttleworth*).
[23] As stated above the Exchange Control Regulations issued by the President under s 9 of the Exchange Control Act.
[24] *Shuttleworth supra* at para 124.
[25] In terms of s 9 of the Exchange Control Act.
[26] *Shuttleworth supra* at para 84. These powers are reserved for the National Assembly in Namibia in terms of Article 44 of the Constitution, while the President assents to legislation and exercises the other functions entrusted to that office in terms of Article 32 of the Constitution.
[27] Section 9 of the Exchange Control Act.
[28] *Shuttleworth supra* at paras117 and 120.
[29] *Shuttleworth supra* paras117 and 120.
[30] In terms of s 24 (1) of the Financial Intelligence Act. Section 1 of the Financial Intelligence Act define 'customer due diligence' to mean 'a process which involves establishing the identity of a client, the identity of the client's beneficial owners in respect of legal persons and monitoring all transactions of the client against the client's profile'.
[31] In terms of s 32(1) of the Financial Intelligence Act.
[32] In terms of s 2 and 39 of the Financial Intelligence Act.
[33] In terms of Schedule 1 of the Financial Intelligence Act para 4 for ADs and para 8 for ADLAs.
[34] Section 43 of the Financial Intelligence Act.
[35] Regulation 32(2) of the Financial Intelligence Regulations Government Notice 3 of 2015 made under the Financial Intelligence Act.
[36] In terms of s 1 of the Financial Intelligence Act the terms 'cash' is defined primarily as domestic and foreign notes and coins. However, 'money' is not defined.

Thus causing Regulation 32(2) that requires full disclosure in cross-border transactions from the sending and receiving country[37] vague and susceptible to judicial criticism.

In summary, the efficiency of both the Exchange Control Regulations and the Financial Intelligence Act is based on the fact that conventional cross-border transactions were within reach of these laws and consequently allow for robust regulation by the licensing of ADs and ADLAs which subjects them to certain legal obligations. This in turn ensures that the Bank and the Centre are able to supervise their operations and have the authority to enforce their regulations by, for instance blocking bank accounts,[38] seizing and forfeiting money to the government.[39] As a result, the Bank and the Centre can effectively enforce their regulations, as failure to comply with the Exchange Control Regulations and Financial Intelligence Act may attract criminal liability.[40]

b) The Cryptocurrency Network

Financial services were revolutionised, when the pseudonym Satoshi Nakamoto created Bitcoin[41] and the network that allows Bitcoins to be issued and traded without the need for an intermediary.[42] Transacting without an intermediary like the Bank may result in what is known as the 'double spending'[43] problem. However, Nakamoto remedied this problem by taking the record keeping function from one single intermediary to the masses.[44] For example, in rural Namibia, if Jack and previously his ancestors owned a farm, the mass community living in that area would be aware of the ownership.[45] If Randy made claim to the farm, the masses would assist Jack in his defence,[46] by confirming his ownership of the farm[47] without necessarily needing the assistance of an intermediary,[48] such as the land registrar. The masses who are required to keep record in this scenario, can further prevent illicit transactions.[49] For instance

[37] Regulation 32(2) of the Financial Intelligence Regulations.
[38] In terms of Regulation 4(2) of the Exchange Control Regulations. Section 9(2)(g)-(h) of the Financial Intelligence Act.
[39] In terms of Regulation 3(3), 3(7), 22B of the Exchange Control Regulations and s 36(7) of the Financial Intelligence Act.
[40] In terms of Regulation 22 of the Exchange Control Regulations and s 63-5 of the Financial Intelligence Act.
[41] Satoshi Nakamoto 'Bitcoin: A Peer-to-Peer Electronic Cash System' (2008) 1.
[42] Nakamoto op cit note 41 at 4.
[43] Jerry Brito and Andrea Castillo 'Bitcoin: A Primer for Policymakers' (2013-2014) 29 (4) *Policy* 3. This occurs when the same money is sent twice because there is no intermediary validating transactions. Nakamoto op cit note 41 at 8.
[44] Nick Furneaux, *Investigating Cryptocurrencies: Understanding, Extracting, and Analyzing Blockchain Evidence* (2018) 5. Nakamoto op cit note 41 at 1.
[45] Furneaux op cit note 44 at 6.
[46] *Ibid.*
[47] *Ibid*.
[48] *Ibid*.
[49] *Ibid*.

where a corrupt Jack attempts to sell the farm to Scott and thereafter tries to resell it to Mandy.[50] The masses would once again be able to intervene and ensure the integrity of Jack's transactions.

Although David Chaum was unsuccessful in providing the first effective cryptocurrency in 1985, he too envisioned the need for 'interlinked computerized record-keeping systems'[51] in order to do away with intermediaries.[52] In the Bitcoin network the record keeping function is known as a blockchain[53] which is a continually updated transactional ledger.[54] That further archives and publicly displays[55] all validated transactions of the network.[56] The community is known as nodes,[57] which are users that have connected their computers and actively participate on the Bitcoin network.[58] The mass that keep record are known as miners[59] who validate transactions and continually update the transactional ledger.[60] And the process of validation is known as mining.[61]

Bitcoin transactions have the ability to operate without any licence as they are purely on a consensus basis,[62] on a person[63] to person network.[64] As such, it is 'permissionless'[65] and decentralised in nature.[66] At present, Bitcoin theoretically operates in Namibia, without

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[50] Furneaux op cit note 44 at 6.
[51] David Chaum 'Security without Identification: Transaction Systems to make Big Brother Obsolete' (October 1985) vol. 28 no. 10 *Communications of the ACM* 1030.
[52] *Ibid*.
[53] Brito and Castillo op cit note 43 at 3. Arvind Narayanan et al *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction* (2016) 11. Furneaux op cit note 44 at 9.
[54] *Ibid* (Interchangeably referred to as the blockchain).
[55] Brito and Castillo op cit note 43 at 3. Narayanan et al op cit note 53 at11. Furneaux op cit note 44 at 9.
[56] *Ibid.*
[57] Nakamoto op cit note 41 at 1-2, Narayanan et al op cit note 53 at 29. Furneaux op cit note 44 at 6. Andreas M. Antonopoulos *Mastering Bitcoin: Unlocking Digital Cryptocurrencies* 2 ed (2015) 6.
[58] *Ibid*
[59] Brito and Castillo op cit note 43 at 4. Narayanan et al op cit note 53 at 11. Antonopoulos op cit note 57 at 27.
[60] Arvind Narayanan and Jeremy Clark 'Bitcoin's Academic Pedigree' (November 2017) vol. 60 no. 12 *Communications of the ACM* 36. Antonopoulos op cit note 57 at 3 and 32. Annamart Nieman 'A Few South African Cents' Worth on Bitcoin' (2015) vol. 18 no. 5 *Potchefstroom Electronic Law Journal* 1986.
[61] Brito and Castillo op cit note 43 at 4. Nieman op cit note 60 at 1987.
[62] Nakamoto op cit note 41 at 8. Nieman op cit note 60 at 1986.
[63] Includes juristic persons.
[64] Nakamoto op cit note 41 at 8. Narayanan et al op cit note 53 at 27. Antonopoulos op cit note 57, goes on to state that because it is a person to person network, there is not one node more superior than another, all nodes on the network are on equal footing, at 139.
[65] Hossein Nabilou and André Prüm 'Ignorance, Debt, and Cryptocurrencies: The Old and the New in the Law and Economics of Concurrent Currencies' (March 2019) vol. 5 no. 1 *Journal of Financial Regulation* footnote 158.
[66] Brito and Castillo op cit note 43 at 3. Nakamoto op cit note 41 at 1. Nieman op cit note 60 at 1986. The exceptions to these decentralised cryptocurrencies are when central institutions, such as the People's Republic Bank of China or the Republic of Marshall Islands issue their own cryptocurrencies. see, Bloomberg 'China Is Close to Releasing Its Own Cryptocurrency' para 6 available at *https://mybroadband.co.za/news/cryptocurrency/316149-china-is-close-to-releasing-its-own-cryptocurrency.html/amp* accessed on 12 August 2019. See also of s 302 of Declaration and Issuance of The

regulatory supervision or any form of accountability.[67] Their borderless nature also raises serious jurisdictional concerns for regulators such as the Bank and the Centre. The next part will examine why users are confident in the Bitcoin network, if the validation of transactions is not executed by a licensed intermediary but rather through self-regulatory protocols.

(i) Cryptography

The confidence in the Bitcoin network is found in its cryptography, which is the underpinning technology that provides the security measures[68] within the network to prevent misappropriation and counterfeiting of Bitcoins.[69] Unlike money where such security features are embedded into the physical money[70] the cryptography offers all of the security features for the Bitcoin network.[71]

(ii) Cryptographic Keys

The next part will discuss the network's cryptographic digital signatures[72] also known as the interlinked public and private cryptographic keys.[73] In a brick and mortar world a paper-based signature serves two purposes, proof of identification[74] and endorsement of a transaction.[75] Bitcoin's cryptographic digital signatures perform the functional equivalence[76] of a paper-based signature by ensuring that its cryptographic keys serve the aforementioned purposes.

Sovereign Currency Act 2018 for Republic of Marshall Islands. For the purpose of this dissertation, such cryptocurrencies will not receive any attention, as the risks and regulation arguably fall within the ambits of such central institution's mandate.

[67] Nakamoto op cit note 41 at 1.

[68] Nakamoto op cit note 41 at 2.

[69] Nakamoto op cit note 41 at 8. Brito and Castillo op cit note 43 at 3. Nabilou and Prüm op cit note 65 at 30.

[70] Narayanan et al op cit note 53 at 1.

[71] *Ibid*

[72] Narayanan et al op cit note 53 at 15.

[73] Narayanan and Clark op cit note 60 at 43. Furneaux op cit note 44 at 23. Brito and Castillo op cit note 43 at 4.

[74] United Nations Commission on International Trade Law Model Law (Model Law) on Electronic Commerce with Guide to Enactment in 1996 and further amended in 1998 at 19. Narayanan et al op cit note 53 at 15.

[75] Model Law *supra* at 19. *Ibid*.

[76]To determine the functional equivalence of a digital technology an evaluation is conducted on the functions which paper-based documents perform, in order to ensure that the digital technology can provide the same or similar functions see Model Law *supra* para 15. See Caroline B Ncube 'Electronic Transaction Law' (2017) *LAWSA LexisNexis* para 494, Jae Faria 'E-commerce and International Legal Harmonization: Time to go beyond Functional Equivalence?' (2004) 16(4) SA *Merc LJ* footnote 9.

In order to transact on the Bitcoin network, users require a 'wallet',[77] which produces and stores the user's keys[78] and allows the user access to his cryptocurrencies and the transactional ledger.[79] Each user is issued with a unique set of interlinked cryptographic keys which serve several purposes.[80] The public cryptographic key indicates the user's pseudonymous identity[81] and Bitcoin address to which Bitcoins can be sent.[82] While the private cryptographic key indicates the sender's endorsement of the transaction[83] and enables the receiver to access the Bitcoins.[84] Therefore, the Bitcoins are never 'physically' in the users' possession as they remain on the network.[85] The private keys allow users access to spend such Bitcoins.[86]

(iii) Cryptographic Hash Function

A Bitcoin will only reflect on the transactional ledger and be at the user's disposal if it was validated.[87] This validation requires the cryptographic hash function.[88] The hash function can simply be understood as a mathematical algorithm which transforms an input of infinite length to a finite output.[89] A practical example of how the cryptographic hash function works, would be when an undetermined number of logs are placed in a manufacturing machine and a wooden chair comes out the other end of the machine.[90] To ensure the integrity of the hash function the algorithm cannot be reversed.[91]

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[77] Antonopoulos op cit note 57 at 61. Accordingly, users can store their cryptographic keys on a selection of wallets, such a paper wallet, where the cryptography keys are simply written down on paper, as this form of wallet is not saved on the internet it known as 'cold storage'. Another example of a cold storage wallet is hardware wallets, such as a memory stick, onto which the cryptographic keys are stored. Then there are also software wallets, which store the cryptographic key on the internet, and are prone to hacking, thus software wallets are also known as 'hot storage', see Furneaux op cit note 44 at 96-102.

[78] Antonopoulos op cit note 57 at 61. The cryptocurrency is never physically within the user's possession, as it remains in the network, see Max I Raskin 'Realm of the Coin: Bitcoin and Civil Procedure' (2015) vol. xx *Fordham Journal Of Corporate & Financial Law* 999.

[79] Furneaux op cit note 44 at 96.

[80] Antonopoulos op cit note 57 at 61.

[81] Nakamoto op cit note 41 at 8. Brito and Castillo op cit note 43 at 4. Narayanan & Clark op cit note 60 at 43. Narayanan et al op cit note 53 at 139, as the transactional ledger displays all transactions along with their associated cryptographic keys, it cannot be said that the transactions are anonymous but rather pseudonymous as the cryptographic keys are not linked to the user's legal name.

[82] Narayanan and Clark op cit note 60 at 43. Antonopoulos op cit note 57 at 61.

[83] Brito and Castillo op cit note 43 at 4.

[84] Furneaux op cit note 44 at 96.

[85] Raskin op cit note 78 at 999.

[86] Raskin op cit note 78 at 978.

[87] Brito and Castillo op cit note 43 at 4.

[88] Nakamoto op cit note 41 at 3. Narayanan et al op cit note 53 at 9.

[89] Kathryn Mitchell 'Bitcoin from the Beginning' (March 2014) *Without Prejudice* 62. Narayanan et al op cit note 53 at 9. Antonopoulos op cit note 57 at 191.

[90] Furneaux op cit note 44 at 17.

[91] Furneaux op cit note 44 at 20.

For a cryptographic hash function to be considered secure it must incorporate three qualities: (1) The hash function must be collision resistant,[92] which means different inputs cannot produce the same output.[93] Given that inputs are infinite and outputs are finite, it is plausible that at some point the outputs may start reoccurring.[94] (2) The computation of the output must be swift for Bitcoin it takes approximately ten minutes.[95] (3) The hash function must incorporate 'puzzle friendliness',[96] meaning it must be immensely difficult to determine the input when presented with a partial input or with the output.[97] These qualities are used to ensure the integrity of the network.

In practice, if a user intends to send a Bitcoin the notification thereof would be sent to the entire network,[98] all of the nodes would be notified of the proposed transaction. This transaction then is placed in the 'mempool'[99] awaiting validation from the miners.[100] Miners will then compete to solve the SHA-256 algorithm of the proposed transaction.[101] 'Proof-of-Work'[102] simply means that miners put effort into solving the complex algorithm.[103] The first successful miner will be rewarded with a newly generated Bitcoin[104] and transaction fees.[105] Once the fixed amount of Bitcoins[106] are in circulation miners will only receive transaction fees as an incentive to continue the mining function.[107]

The incentives miners receive to perform the mining function, may be a vulnerability, as there is no contractual obligation or any legal ramifications in place if miners fail to add validated transactions to the blockchain. Once validated the proposed transaction's unconfirmed status will change to confirmed and the information of the transaction will be placed in a 'candidate block'[108] awaiting to form part of the transactional ledger.[109] In order to ensure synergy between the blocks in the blockchain the newest block, also known as the

[92] Narayanan et al op cit note 53 at 2.
[93] Narayanan et al op cit note 53 at 2-5.
[94] Narayanan et al op cit note 53 at 3.
[95] Furneaux op cit note 44 at 40.
[96] Narayanan et al op cit note 53 at 8.
[97] Narayanan et al op cit note 53 at 9.
[98] Mitchell op cit note 89 at 62.
[99] Furneaux op cit note 44 at 40. Antonopoulos op cit note 57 at 181.
[100] Furneaux op cit note 44 at 69.
[101] Brito and Castillo op cit note 43 at 4. Nakamoto op cit note 41 at 8
[102] Furneaux op cit note 44 at 89.
[103] *Ibid.*
[104] Nakamoto op cit note 41 at 4. Brito and Castillo op cit note 43 at 4.
[105] Narayanan and Clark op cit note 60 at 42.
[106] The predetermined number is set at 21 million Bitcoins, which is the network's method of avoiding inflation, see Nieman op cit note 60 at 1987.
[107] Brito and Castillo op cit note 43 at 4.
[108] Antonopoulos op cit note 57 at 182.
[109] *Ibid.*

'child'[110] block, will always have a portion of the previous block's, also known as the 'parent'[111] block's hash information in its block header.[112] As blocks on the blockchain are arranged in chronological order[113] the confirmed transaction's block header will also include a timestamp.[114] The block header will in turn include the root hash of the 'Merkle tree'.[115] Therefore, the blocks on the blockchain are interlinked, by the Merkle Tree[116] which is another security mechanism the Bitcoin network deploys to ensure the integrity of its transactions.[117]

If a corrupt node tries to manipulate one block on the blockchain, such node would be required to manipulate every block, up until the 'genesis block'.[118] As the blocks are all interlinked, the manipulated block would not coincide with the validated blocks on the blockchain.[119] In this manner the cryptography makes it mathematically unfeasible to manipulate the blockchain,[120] as a manipulated block would easily be detected by the network.[121]

As Bitcoin rules are consensus based if majority of the miners wish to adopt a new rule[122] or upgrade to a different software[123] and the minority disagrees then the blockchain will split into what is known as a 'fork'.[124] The fork will result in two distinct blockchains, which have the same history before the forking took place.[125] Forking may also be considered as a vulnerability when a user sends Bitcoins but due to an unsuspected fork the Bitcoins are paid twice as they are reflected on both such blockchains, this is known as a 'replay-attack'.[126]

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[110] Antonopoulos op cit note 57 at 162.
[111] Antonopoulos op cit note 57 at 161.
[112] Narayanan et al op cit note 53 at 11.
[113] Nakamoto op cit note 41 at 1.
[114] Nakamoto op cit note 41 at 2. Timestamping transactions also prevents double spending, according to Brito and Castillo op cit note 43 at 4. A timestamped transaction can also be considered as digitally notarised transaction, according to Narayanan and Clark op cit note 60 at 38.
[115] Victoria Louise Lemieux 'Trusting Records: is Blockchain Technology the Answer?' (18 July 2016) vol.26 no. 2 *Records Management Journal* 121.
[116] Narayanan and Clark op cit note 60 at 39.
[117] Antonopoulos op cit note 57 at 168.
[118] Antonopoulos op cit note 57 at 161.
[119] Narayanan et al op cit note 53 at 12.
[120] *Ibid.*
[121] Narayanan et al op cit note 53 at 11.
[122] This is known as a 'hard fork', according to Furneaux op cit note 44 at 59.
[123] This is known as a 'soft fork', according to Furneaux op cit note 44 at 60.
[124] Furneaux op cit note 44 at 58-60.
[125] Bank for International Settlements 'Cryptocurrencies: Looking Beyond the Hype' (June 2018) *Annual Economic Report* 103.
[126] Lemieux op cit note 115 at 128. There are numerous other vulnerabilities in the self-regulating network, such as a '51% attack', see Furneaux op cit note 44 at 41. A 'sybil attack' see Narayanan et al op cit note 53 at 32. A 'man-in-the-middle attack' see Lemieux op cit note 115 at 128. However, a lengthy discussion on these possible vulnerabilities in the network is not required for the purpose of this dissertation, suffice to state that the network is theoretically not beyond corruption. Plassaras Nicholas A, argues that these concerning aspects of the self-

Despite the vulnerabilities illustrated above, cryptocurrencies are still attractive to users and have the ability for both legal and illegal borderless financial transactions, hence they should be regulated. This comparative analysis has illustrated that the efficiency of the Exchange Control Regulations and the Financial Intelligence Act are based entirely on the supervision exercised over licensed ADs and ADLAs. Therefore, the current laws are ineffective to regulating cryptocurrencies and require amendments.

The permissionless cross-border cryptocurrencies could in theory be performing the same transactions but in a manner that evades Namibian law as they are currently out of the reach of the regulators in the absence of effective regulation. The ability to supervise cryptocurrencies and ensure their compliance with Namibian law is further obstructed by the fact that these cross-border transactions are conducted pseudonymously, coupled with the fact that jurisdictional uncertainty lingers for these borderless transactions. For the proposed regulation to be effective, it is important to understand the rationale behind the laws it seeks to protect, this will be done in chapter four.

regulatory network can be remedied by the IMF and its members infiltrating the network in order to regulate it at grass-root level, see Plassaras Nicholas A 'Regulating Digital Currencies: Bringing Bitcoin within the Reach of the IMF' (2013) vol 14 *Chicago Journal of International Law* 405-406. However, this dissertation, does not advocate for the regulation of the technology underpinning cryptocurrencies.

IV. CHAPTER 4: REGULATION OF CROSS-BORDER TRANSACTIONS

This chapter is divided into three parts, the first part will assess the rationale behind capital and exchange controls and provide a synopsis of how government implements those controls. Thereafter, a comparative analysis will be conducted on selected countries' approaches to the regulation of cross-border cryptocurrency transactions within their countries. The results of this benchmarking exercise will inform the final part of this chapter which provides the criteria for selecting the most appropriate regulatory framework for Namibia.

a) The Rationale of Regulating Cross-border Transactions

As this dissertation advocates for the regulation of cross-border cryptocurrency transactions in order to subject them to both AML/CFT laws as well as capital and exchange controls it is worth noting that the rationale behind the implementation of AML/CFT laws is essentially to ensure that the financial industry, especially the banking sector is solely used for legitimate purposes. The rest of this part of the chapter will focus its attention on capital and exchange controls.

Conventionally, countries record a summary of their transactions in what is known as a 'balance of payments'.[1] This accounting record reflects both domestic and cross-border transactions between residents and non-residents within a given country over a certain period.[2] The balance of payments is systematically divided into three accounts, namely the current, capital and financial accounts.[3] The current account reflects trading activities of goods and services as well as various sources of incomes.[4] The capital account displays the 'nonfinancial assets'[5] such as donations.[6] While the financial account captures the change in ownership between net 'financial assets and liabilities'.[7]

In practice, the totals from the current and capital accounts should be equal to the total in the financial account.[8] Naturally, it is in the best interest of an economy that such totals indicate a surplus in its balance of payments. In order to secure a surplus balance, the government, usually by means of the central bank, may impose firm regulations on cross-border transactions

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[1] International Monetary Fund (IMF) *Balance of Payments and International Investment Position Manual* (BPM6) (2009) at 9 (Manual). IMF *Balance of Payments* (1996) at 1.
[2] *Ibid*.
[3] *Ibid*.
[4] *Ibid*.
[5] *Ibid*. Eugenia Andreasen, Martin Schindler & Patricio Valenzuela 'Capital Controls and the Cost of Debt' (2017) *IMF Working Paper WP/17/135* 8.
[6] *Ibid.*
[7] *Ibid*.
[8] *Ibid*.

which can cause instability within its economy.[9] Such instability may be caused by the inflow of foreign money on a short-term basis that in turn results in unsustainable increases in the exchange rate in the domestic country.[10] These transactions are concerning because if such money is removed as quickly as it entered the economy it can weaken the economy.[11] Another example of cautionary transactions would be if residents spend their money in foreign countries, as this limits the growth of the domestic country and equally taxes its foreign reserves. Therefore, capital controls may be imposed to protect the financial industry especially the commercial banks in their developmental phase.[12]

It is for these reasons, amongst others, that governments intervene by disciplining market forces through proactively regulating cross-border transactions. According to the International Monetary Fund (IMF) there are various forms of regulation which can restrict market forces.[13] By for instance, regulating the issuance of money for price stability,[14] controlling the sale of foreign money and further subjecting cross-border transactions to regulation.[15]

While the inflow of money can have significant advantages to a beneficiary country such as reducing the need to incur debt.[16] It also has negative consequences, by placing an overreliance on the inflow of money, the beneficiary country may be compromising its opportunity to invest in sustainable forms of development like manufacturing.[17]

In turn the outflow of money from a donor country may deplete its foreign reserves, especially if the donor country is a low-income or middle-income country like Namibia. As a result, government may intervene by regulating cross-border transactions with the imposition of capital and exchange controls to mitigate such adverse consequences.

Essentially capital and exchange controls are used to preserve a country's foreign reserves and thereby ensure that such country remains solvent. The greatest risk that cross-

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[9] In *South African Reserve Bank and Another v Shuttleworth and* Another 2015 (8) BCLR 959 (CC) it was stated that the primary purpose of capital and exchange controls is to 'discourage the export of capital and to protect the domestic economy' para 53.
[10] R. Barry Johnston & Natalia T. Tamirisa 'Why Do Countries Use Capital Controls?' (December 1998) *IMF Working Paper WP/98/181* at 14.
[11] Jonathan D. Ostry et al 'Capital Inflows: The Role of Controls' (19 February 2010) *IMF Staff Position Note SPN/10/04* at 4.
[12] Johnston & Tamirisa op cit note 10 at 14.
[13] *Ibid.* Ostry et al op cit note 11 at 4.
[14] *Ibid.*
[15] *Ibid.*
[16] Ahmat Jidoud 'Remittances and Macroeconomic Volatility in African Countries' (2 March 2015) *IMF Working Paper Working Paper No. 15/49* at 5.
[17] Meyer Dietmar & Shera Adela 'The Impact of Remittances on Economic Growth: An Econometric Model' (2017) vol. 18 no. 2 *EconomiA* 150.

border cryptocurrency transactions pose to Namibia's capital and exchange controls is that in the absence of regulation they are in theory able to be converted into money and evade Namibia's exchange controls. As well as when money is converted into cryptocurrencies and evades capital controls. Theoretically the money can be transferred out of Namibia, without the Bank's prior approval, which in turn taxes Namibia's foreign reserves.

There are various forms of regulating cross-border transactions, for example, by subjecting transacting parties to procedural requirements,[18] one of these requirements may include obtaining the prior approval from the relevant regulator.[19] Governments can also discourage cross-border transactions by levying taxes against them.[20] The form of regulation is not as important as achieving the desired result, which is ultimately the preservation of the country's foreign reserves.

Historically, the interwar and the period thereafter were characterised by exchange and capital controls all over the world,[21] as countries desperately sought to stabilise their economies. As a result, on 22nd July 1944 at the Bretton Woods conference, the IMF legitimised capital controls in its Articles of Agreement.[22] At a later stage, the IMF removed exchange controls because they were seen as a hinderance to global trade.[23]

When countries' economies began to stabilise, they did away with capital and exchange controls. As an illustration, the USA gradually removed its capital controls from 1974,[24] while Europe followed suit in 1980.[25] More countries removed their capital controls when they noticed that the controls had adverse effects, such as limiting economic growth by creating unpleasant conditions for foreign investment,[26] thereby adversely affecting global trade.[27]

The efficacy and need for exchange and capital controls may further be considered inconclusive when regard is had to the East Asian financial crisis that began in the middle of

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[18] Age F.P. Bakker *The Liberalization of Capital Movements in Europe: The Monetary Committee and Financial Integration 1958-1994* (1996) 11.
[19] *Ibid*.
[20] Bakker op cit note 18 at 13.
[21] Christopher J. Neely 'An Introduction to Capital Controls' (November/December 1999) *Review* 13.
[22] In terms of Article VI s 3 of the Articles of Agreement of the International Monetary Fund of 15 September 1993 (Articles of IMF). Neely op cit note 21 at 13.
[23] In terms of Article I (iv) of the Articles of the IMF op cit note 22. Natalia T. Tamirisa 'Exchange and Capital Controls as Barriers to Trade' (March 1999) vol. 46 no. 1 *IMF Staff* Papers 69.
[24] Neely op cit note 21 at 14.
[25] Bakker op cit note 18 at 1.
[26] Michael Frenkel et al 'The Effects of Capital Controls on Exchange Rate Volatility and Output' (November 2001) *IMF Working Paper WP/01/187* at 22. Tamirisa op cit note 23 at 71.
[27] *Ibid*.

1997.[28] During the crisis, Malaysia imposed both exchange and capital controls in a bid to salvage its economy.[29] In 1998 the IMF stated that these controls were a setback to not only Malaysia but other emerging markets as they brought about uncertainty amongst investors.[30] Thailand on the other hand, imposed less severe controls.[31] While Korea braved the crisis without imposing any controls.[32] Ironically all three countries were able to weather the financial crisis,[33] leading to the inclusive stance regarding exchange and capital controls.

Nevertheless, in 2010 the IMF confirmed that capital controls may still be deployed when appropriate.[34] However, countries utilising such controls should regularly evaluate the appropriateness thereof.[35] Their appropriateness can be determined in terms of Article XIV of the IMF's Articles of Agreement of 2016 which permits countries to impose capital controls in a manner that progressively works towards capital 'liberalization'.[36] The IMF further provides guidelines on how countries can steadily relinquish their capital controls while working towards capital liberalization.[37]

The benefits of this transition include; global financial risk sharing[38] and appropriate distribution of money which in turn propels economic growth.[39] However, in terms of the 'impossible trinity'[40] theory a country must strategically consider its options, because the hypothesis holds that a country will not be able to have (1) a stable foreign exchange rate,[41] (2) capital liberalization,[42] and (3) monetary policy autonomy.[43] At best a country can have two of the aforementioned options during a given period.[44]

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[28] Steven Radelet et al 'The East Asian Financial Crisis: Diagnosis, Remedies, Prospects' (1998) vol. 1998 no. 1 *Brookings Papers on Economic Activity* 1.
[29] Frenkel et al op cit note 26 at 6.
[30] Frenkel et al op cit note 26 at 6-7.
[31] Frenkel et al op cit note 26 at 18-19. Radelet et al op cit note 28 at 28.
[32] Frenkel et al op cit note 26 at 18. *Ibid*.
[33] Frenkel et al op cit note 26 19.
[34] Ostry et al op cit note 11 at 15.
[35] *Ibid*.
[36] 'Capital liberalization' can be understood as a government's decision to allow the flow of money into and out of its borders, according to Bakker op cit note 18 at 2.
[37] See Giovanni Dell'Ariccia et al 'Reaping the Benefits of Financial Globalization' (2008) IMF *Occasional Paper 264*.
[38] Dell'Ariccia op cit note 37 at 24.
[39] *Ibid*.
[40] Also known as the 'trilemma', according to Joshua Aizenman, Menzie David Chinn & Hiro Ito 'The "Impossible Trinity" Hypothesis in an Era of Global Imbalances: Measurement and Testing' (2013) vol. 21 no.3 *Review of International Economics* 447.
[41] *Ibid*.
[42] Aizenman, Chinn & Hiro Ito op cit note 40 at 447.
[43] *Ibid*.
[44] *Ibid*.

That being so, governments must diligently consider the aforementioned factors to identify what is the most appropriate capital or exchange controls for its jurisdiction. If a country were to liberate capital flows and have a fixed foreign exchange rate, it may have to forfeit its monetary policy autonomy. Equally so, if a country maintains its monetary policy autonomy and liberates capital flows, it may in turn expose itself to volatile foreign exchange rates. Namibia as a member state of the CMA does not practice capital liberalization, as it imposes capital and exchange controls to ultimately remain solvent.

b) Comparative Analysis of Cryptocurrency Regulation in Selected Jurisdictions

In order to formulate Namibia's regulatory framework for cross-border cryptocurrency transactions, a benchmarking exercise will be conducted on selected countries' cross-border cryptocurrency regulations. This exercise will be limited to the following core considerations: (1) has the country instilled the requirement of licensing cryptocurrency service providers? (2) If affirmative, does the licensing procedure remove the pseudonyms of users, allow for effective regulatory supervision and the implementation of preventative measures such as customer due diligence? (3) Does the cross-border cryptocurrency regulatory framework ensure compliance with the other laws of the selected country, particularly AML/CFT and where applicable its capital and exchange controls? (4) How does the regulation effectively dispense with jurisdictional concerns raised by these cross-border transactions?

(i) South Africa

At present, South Africa has no specific legislation or guidelines on the regulation of cryptocurrency transactions.[45] Transacting with cryptocurrencies is not subjected to any licensing as such, the transacting parties assume the full risks of the transactions.[46] The Crypto Assets Regulator Working Group, a branch under the Intergovernmental FinTech Working Group (IFWG), released the Consultation Paper on Policy Proposals for Crypto Assets which essentially proposes that South Africa should move to 'limited regulation'[47] by extending the legislative obligations of accountable institutions to cryptocurrency service providers,[48] in terms of the Financial Intelligence Centre Act, 38 of 2001.

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[45] The South African Reserve Banks website Frequently asked questions available at *https://www.resbank.co.za/RegulationAndSupervision/FinancialSurveillanceAndExchangeControl/FAQs/Pages/VirtualCurrenciesCryptocurrencies.aspx* accessed on 23 January 2020.
[46] Crypto Assets Regulator Working Group *IFWG Consultation Paper on Policy Proposals for Crypto Assets* (16 January 2019) para 5.3.4.
[47] Crypto Assets Regulator Working Group op cit note 46 at para 5.3.2.
[48] *Ibid*.

When promulgated this regulation will require that service providers conduct the same customer due diligence and reporting requirements with their users as other accountable institutions are required to do. Cross-border transactions in and from South Africa are subjected to its Exchange Control Regulations. However, these controls may in theory be evaded in the absence of cryptocurrency regulation in South Africa.[49]

(ii) Rwanda

Rwanda's position in terms of regulation of cross-border cryptocurrency transactions is similar to South Africa's, in that it has no such regulation nor is there any indication at present that it intends to regulate these transactions. Despite this, Rwanda has taken a more embracive approach towards cryptocurrencies in general. In 2017 the National Bank of Rwanda (National Bank) released an article which alludes to the prospects of Rwanda creating its own cryptocurrency.[50] Thereafter, in 2019 Bloomberg reported that the National Bank is currently conducting a benchmarking exercise on a selection of central banks such as that of the Netherlands and Singapore who have used blockchain technology.[51]

(iii) South Korea

The Financial Services Commission in conjunction with the Korean Financial Intelligence Unit require that cryptocurrency transactions be executed with the users' legal name.[52] This has been done by extending the traditional financial regulation to cryptocurrency transactions.[53]

Further limiting the use of cryptocurrency transactions to citizens who have acquired the age of majority.[54] Although this limitation is not necessarily good for foreign investment, it arguably assists the South Korean regulators with jurisdictional concerns that arise from cross-border cryptocurrency transactions.

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[49]South Africa is however planning on attending to these concerns, see James Preston 'Is the SA Reserve Bank about to Clamp Down on Crypto in South Africa? *SA CRYPTO* 30 November 2019 available at *https://sacrypto.co.za/is-the-sa-reserve-bank-about-to-clamp-down-on-crypto-in-south-africa/* accessed on 3 December 2019.

[50] Samuel Baker and Nyirakanani Regine 'Cryptocurrencies: A threat to the Central Bank system?' (2017) *Global Insights* 3.

[51] Saul Butera 'Rwandan Central Bank Studying Ways of Issuing Digital Currency' *Bloomberg* 22 August 2019, available at *https://www.bloomberg.com/news/articles/2019-08-22/rwandan-central-bank-studying-ways-of-issuing-digital-currency* accessed on 15 November 2019.

[52] Services Commission 'Financial Measures to Curb Speculation in Cryptocurrency Trading' (23January 2018) *Press Release* (Financial Measures to Curb Speculation Press Release) 1.

[53] *Ibid*.

[54] Financial Measures to Curb Speculation Press Release op cit note 52 at 1.

South Korea further makes it mandatory for all cryptocurrency users to link their private cryptographic keys to their bank accounts.[55] From a monitoring and supervisory stance users are restricted from transacting on cryptocurrency platforms as transactions can only be executed by service providers.[56] It is for this reason that service providers who provide exchange services are required to have two separate bank accounts.[57] The account that is used for users cryptocurrency exchanges is subjected to 'enhanced due diligence'[58] requirements to ensure that cryptocurrency transactions are adherent to anti-money laundering obligations.[59] Banks and service providers are further subject to inspections by the Financial Services Commission in conjunction with the Korean Financial Intelligence Unit.[60]

In terms of AML/CFT laws, the Korean Financial Intelligence Unit's Guidelines for Anti-Money Laundering with Cryptocurrency proscribes cryptocurrency transactions if the transacting parties' identities are not confirmed.[61] These Guidelines in addition to the Act on Reporting and Using Specified Financial Transaction Information seek to ensure that cryptocurrencies are not used for illicit purposes in South Korea.[62] Moreover, the country seeks to ensure harmonious regulation by encouraging its members of the financial industry to share relevant information amongst themselves[63] as well as to international service providers[64] to ensure that cross-border cryptocurrency transactions do not evade the law.[65]

At present Korea's Parliament is deliberating the customised draft regulations for cryptocurrencies[66] which seek to provide regulators with a direct approach to regulating cryptocurrencies. The Financial Intelligence Unit has also proposed enacting a licensing requirement in amendments to the Act on Reporting and Using Specified Financial Transaction Information.[67] These proposed amendments are in line with the FATF's International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation

[55] Financial Measures to Curb Speculation Press Release op cit note 52 at 1.
[56] Apolline Blandin et al 'Global Cryptoasset Regulatory Landscape Study' *University of Cambridge* 103.
[57] Financial Services Commission 'Revision to Virtual Currency Anti-Money Laundering Guidelines' (27 June 2018) Press Release (Revision Anti-Money Laundering Guidelines Press Release) 1.
[58] *Ibid*.
[59] *Ibid.* Financial Measures to Curb Speculation Press Release op cit note 52 at 1.
[60] *Ibid*
[61] *Ibid* Financial Measures to Curb Speculation Press Release op cit note 52 at para 3.
[62] Blandin et al op cit note 56 at 103.
[63] Financial Measures to Curb Speculation Press Release op cit note 52 at para 4.
[64] Revision Anti-Money Laundering Guidelines Press Release op cit note 57 at 1-2.
[65] *Ibid.* Financial Measures to Curb Speculation Press Release op cit note 57 at para 4.
[66] Blandin et al op cit note 59 at 103.
[67] Chainalysis 'Economic Trends, Regulatory Updates, and Blockchain Analysis Enhancements' *APAC Cryptocurrency Report* 9.

Recommendations of June 2019 (FATF Recommendations) for the regulation of cryptocurrencies.[68]

(iv) European Union

The European Union (EU) has amended its position to address the concerns of illicit flows of money with the use of cryptocurrencies. These amendments are captured in Directive (EU) 2018/843 of the European Parliament and of the Council of 30th May 2018 (5th AML Directive). This Directive extends the scope of 'obliged entities'[69] to include service providers that provide exchange services and the custodians of customers private cryptographic keys.[70] Compliance with the 5th AML Directive is mandatory for member states of the EU from 10th January 2020.[71]

Germany is one of the member states that will have to comply with the 5th AML Directive. In general, the use of cryptocurrencies in Germany does not require a license from the Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*) (BaFin).[72] However, all users or service providers who seek to provide financial services for commercial gain in Germany require prior written approval from BaFin.[73] By virtue of it granting authorisation[74] BaFin has regulatory supervision over such service providers and may thus subject them to the same legal obligations as other financial institutions in Germany.

While rendering financial services for commercial gain without a license is an offence,[75] it is still uncertain whether cryptocurrency service providers require such license.[76] It is apparent that Germany needs cryptocurrency regulation to dispense with these discrepancies. In order to ensure compliance with the 5th AML Directive Germany will at the very least need

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[68] Chainalysis 'Economic Trends, Regulatory Updates, and Blockchain Analysis Enhancements' *APAC Cryptocurrency Report* 9. Recommendation 15 of the Financial Action Task Force 'International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation' (June 2019) (FATF Recommendations).

[69] As provided for in Article 2 of the Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015, obliged entities are equivalent to Namibia's accountable institutions.

[70] In terms of Article 1(c) of the Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 (5th AML Directive).

[71] In terms of Article 4(1) of the 5th AML Directive.

[72] Federal Financial Supervisory Authority's (BaFin) Website available at *https://www.bafin.de/EN/Aufsicht/FinTech/VirtualCurrency/virtual_currency_node_en.html* accessed on 26 January 2020.

[73] In terms of s 32 (1) of the German Banking Act (*Kreditwesengesetz*) (German Banking Act).

[74] In terms of s 33 (1) of the German Banking Act.

[75] In terms of s 54 of the German Banking Act.

[76] See Online & Recht available at *https://www.online-und-recht.de/urteile/Handel-mit-Bitcon-ist-nicht-strafbar-da-Bitcoin-kein-Finanzinstrument-im-Sinne-des-KWG-Kammergericht-Berlin-20180925/* accessed on 26 January 2020.

to have a register containing all of the prescribed information of its service providers.[77] This register may assist Germany with defending jurisdictional challenges.

Cross-border transactions trigger certain reporting requirements to the *Bundesbank* in terms of the Foreign Trade and Payments Ordinance.[78] The definition for payment in s 67(3) of the Foreign Trade and Payments Ordinance is arguably wide enough to include any legal classification Germany may ascribe to cryptocurrencies. Nevertheless, in the absence of regulation it remains to be seen how Germany can monitor and enforce these provisions.

Italy, as another EU member state has resolved to regulate cryptocurrencies through its Inland Revenue in its *Resoluzione* N.72/E of 2nd September 2016. As such service providers that operate in Italy are first required to be licensed before commencing with business activities.[79]And are further required to be compliant with all AML/CFT laws,[80] which includes linking customers' legal names to their cryptographic wallets.[81] This licensing process assists Italy in removing pseudonymous transactions for illicit purposes and may further address jurisdictional concerns.

(v) New York in the USA

Although the Congress of the United States is still deliberating the 'Virtual Currency Consumer Protection'[82] Bill, the Department of Financial Services (Department) for the State of New York has since 2015[83] required all commercial cryptocurrency activities[84] to be subjected to a

[77] 5th AML Directive op cit note 70 para 20, 33-5.
[78] In terms of s 67 (1) of the Foreign Trade and Payments Ordinance.
[79] The Financial Action Task Force (FATF) *Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers* (June 2019) (FATF Guidance) at 46.
[80] *Ibid.*
[81] *Ibid*.
[82] US Congress Website available at *https://www.congress.gov/bill/115th-congress/house-bill/7224/text?format=txt* accessed on 22 November 2019.
[83] New York State Department of Financial Services Website *https://www.dfs.ny.gov/reports_and_publications/press_releases/pr1509221* accessed on 22 November 2019. Susan Alkadri 'Defining and Regulating Cryptocurrency: Fake Internet Money or Legitimate Medium of Exchange?' (2018) vol.17 no.1 *Duke Law & Technology Review* 84.
[84] Official Compilation of Codes, Rules and Regulations of the State of New York Title 23. Financial Services Chapter I. Regulations of the Superintendent of Financial Services Part 200. Virtual Currencies in terms of s 200.1 and 200.3(a) (New York Regulations) on the New York State Department of Financial Services Website available at *https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I7444ce80169611e594630000845b8d3e&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)* accessed on 22 November 2019.

license issued by the Department.[85] The license is also known as a 'BitLicense'.[86] As the licenses are issued by the Department,[87] it has regulatory supervision over service providers as its powers include suspension or revocation of licenses,[88] examining the affairs of service providers.[89] In essence, the New York Regulations extend the conventional framework of banking regulations to licensed service providers.

Applicants are required to make full disclosures of prescribed information including the submission of fingerprints by their primary officers.[90] Similar disclosures are required from the service provider's users.[91] The New York Regulations also require service providers to be compliant with all of New York's and federal laws,[92] including AML obligations.[93] In terms of preventing money laundering each service provider is required to assess its risks and customise a program to address those risks.[94]

Jurisdictional concerns are addressed in the New York Regulations by purposely limiting the scope of application to commercial transactions that either involve New York or are executed by New York residents.[95] For the efficacy of enforcing its regulations New York prohibits service providers from transacting with service providers that only have a digital presence.[96]

This benchmarking exercise has revealed that while South Africa and Rwanda lag behind, countries such as South Korea, the EU and the state of New York are proactively regulating cross-border cryptocurrency transactions. By ensuring that they know who transgressed their regulations and placing such transgressors within their reach with a form of licensing. This provides these countries with regulatory supervision. And addresses possible

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[85] In terms of s 200.3(a) of the New York Regulations. The New York Regulations also provides for instances where the use of cryptocurrencies will be exempted from requiring a license in terms of s 200.3(c)(1)-(2) of the New York Regulations.

[86] New York State Department of Financial Services Website *https://www.dfs.ny.gov/reports_and_publications/press_releases/pr1509221* accessed on 22 November 2019. However, the reaction from industry is that the requirements for a BitLicense are too stringent and costly, see Alkadri op cit note 83 at 84.

[87] In terms of s 200.6(b) of the New York Regulations.

[88] In terms of s 200.6(c) of the New York Regulations.

[89] In terms of s 200.13 of the New York Regulations.

[90] In terms of s 200.4(1)-(5) of the New York Regulations.

[91] In terms of s 200.12 and 200.15(h)(1) of the New York Regulations. If the customer is a foreigner, the due diligence requirements are more stringent in terms of s 200.15(h)(2) of the New York Regulations.

[92] In terms of s 200.7(a) of the New York Regulations.

[93] In terms of s 200.15 of the New York Regulations.

[94] In terms of s 200.15(b) of the New York Regulations. While s 200.15(c) of the New York Regulations details the minimum requirements, such program should include.

[95] In terms of s 200.2(q) of the New York Regulations.

[96] In terms of s 200.15(h)(3) of the New York Regulations.

jurisdictional challenges by either prohibiting non-citizens from engaging in cryptocurrency transactions on their platforms, as seen in South Korea. Alternatively, by extending the scope of their regulation to service providers licensed within their jurisdiction or transactions that took place within their jurisdiction, as seen in the state of New York. Therefore, if a matter is brought before their courts, they would have jurisdiction over these borderless cryptocurrency transactions because they can enforce their judgments against their residents and the service providers in their jurisdictions.

c) Criteria for an Appropriate Regulatory Framework for Namibia

The ultimate purpose of Namibia's cross-border regulation should be to protect the integrity of its financial industry while at the same time preserving its foreign reserves. Building on the benchmarking exercise, this can be achieved by ensuring the accountability and transparency of cross-border cryptocurrency transactions.

As a primary consideration for its regulatory framework for cryptocurrencies, Namibia should determine which parties its regulators should supervise. Due to the fact that Namibia places restrictions on the movement of money outside of the CMA on both customers and service providers, therefore the cross-border cryptocurrency regulation must include the licensing of service providers and also subjecting their users to such regulation by prohibiting users from transacting without a licensed service provider. Further in line with Namibia's capital and exchange controls, the proposed regulation should have supervision over both commercial and non-commercial cryptocurrency transactions. This will place the same legal requirements on cross-border cryptocurrency transactions as money.

The regulation should also provide for effective regulatory supervision by the Bank and the Centre. Furthermore, there should be requirements that limit cryptocurrency transactions to a legal name basis, subjecting licensed service providers to satisfying due diligence requirements and other AML/CFT requirements. As well as including the licensed service providers into the list of accountable institutions. Licensing will further ensure that cross-border cryptocurrency transactions that involve Namibia or a Namibian resident is subjected to Namibian laws, thereby ensuring that Namibian courts have jurisdiction to enforce such regulation. The proposed regulatory framework will be discussed in more detail in the next chapter.

V. CHAPTER 5: NAMIBIA'S REGULATORY FRAMEWORK FOR CROSS-BORDER CRYPTOCURRENCY TRANSACTIONS

Although the architects of Bitcoin and other cryptocurrencies intended for their operations to fall outside the ambits of central regulation, the core problem with cryptocurrencies is their decentralised and borderless nature which is not subjected to robust financial regulation. Therefore, this dissertation has evaluated whether Namibia can regulate cross-border cryptocurrency transactions, and has presented arguments that it is possible, though to a limited degree. This chapter will discuss the framework for Namibia's regulation of cross-border cryptocurrency transactions.

a) Harmonisation will ward off Regulatory Arbitrage

As cryptocurrency transactions are internet based, they are borderless in nature. Therefore, with the threat of regulatory arbitrage, it is essential to have a multitiered regulatory framework for effective regulation.[1] This multitiered regulatory framework is required to ensure harmonisation of regulation amongst all countries. As it merely requires one lax country to compromise the entire regulatory regime.

However, there is a lack of consensus amongst countries on the legal classification of cryptocurrencies,[2] therefore it would be ill-advice to propose that such harmonisation be in the form of a binding treaty or an international agreement. Countries would be reluctant to sign on to a treaty or an international agreement which contradicts their ideologies.

At this point in time it would be more feasible to create a comprehensive model law at an international level with the most essential provisions each country's cryptocurrency regulation should contain. Such regulation should require service providers to be licensed. Subjecting both service providers and users to regulatory supervision and compliance with their laws. Thereafter, countries can build on the essential provisions according to their individual policies. The ideal international bodies to draft such model law are branched in the United Nations, namely the United Nations Commission on International Trade Law (UNCITRAL)

[1] The Financial Action Task Force 'Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (June 2019) (FATF Guidance) paras 87 and 135. The Financial Action Task Force 'International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation' (June 2019) (FATF Recommendations) Recommendations 36-40. The FAFT Recommendations further state that the regulatory supervision should be entrusted to a competent authority, therefore this dissertation argues that the Bank and the Centre would be able to dispense with cryptocurrency regulation effectively. Provided that they are equip with the appropriate regulations and detection methods for the offenders of such regulations.

[2] For example, Italy considers cryptocurrencies as foreign money, while South Africa is lending towards the classification of an asset.

who have in the past proven themselves competent to execute this task[3] and the other international body is the International Money Laundering Information Network (IMoLIN) whose wealth of research on internet related money-laundering and financing of terrorism can assist in compiling a comprehensive model law.[4]

As this model law seeks to provide guidance on regulating cryptocurrencies which are highly dependent on ever evolving technology, it should not be too prescriptive by trying to regulate the technology and rather regulate the transactions facilitated by such technology. This is vital, as prescriptive regulation may fail to take account of future technological advancements,[5] causing the regulation to soon become outdated and ineffective.

Thereafter, the African Union (AU) should adopt the essential provisions in a convention or agreement. This should be followed by the adoption by the Southern African Development Community (SADC) at sub-regional level. Finally, Namibia should ratify[6] and incorporate the essential provisions into national legislation and then build on them according to its ideologies. This can be done in two manners, either by merely drafting an amendment under the General Law Amendment Act[7] to amend existing legislation such as the Banking Institutions Act, Payment Systems Management Act, the Financial Intelligence Centre Act, the Companies Act, Credit Agreements Act 75 of 1980, and the Exchange Control Regulations, and any other relevant financial legislation.

Such amendments should seek to address administrative elements for cryptocurrency regulation. These elements include service providers' obligation to have two separate accounts, the appointment and disqualification of directors, officers and auditors, and the fit and proper standards for principle officers. As well as cybersecurity and custodianship of private cryptographic keys requirements, disaster recovery plans, disclosures to customers, assumption of risks, and inspections by the Bank and the Centre. From a punitive perspective there should be an imposition of civil, criminal and administrative penalties for offenders of the proposed

[3] United Nations Commission on International Trade Law 'Modernizing International Trade Law to Support Innovation and Sustainable Development Proceedings of the Congress of the United Nations Commission on International Trade Law (4-6 July 2017) vol. 4 Vienna 94.
[4] IMoLIN website available at https://www.imolin.org/imolin/en/about_us.html accessed on 31 January 2020.
[5]Regulators should find the equilibrium between being too prescriptive on one end and too vague on the other end. As vague regulation will be interpreted against the legislature, see *S v Stassen* 1965 (4) SA 131 (T). While prescriptive regulation will soon become outdated when technology advances further.
[6] Notably, once an international treaty is ratified by Namibia it arguably forms part of Namibian law in terms of Article 144 of the Constitution.
[7] General Law Amendment Act 14 of 2005.

regulation.[8] A detailed discussion on these amendments fall outside the ambits of this dissertation.

Alternatively, Namibia could create a customised legislation dealing specifically with cryptocurrency regulation, which would be more responsive to technological advancements than current legislation. As this unresponsiveness may create loopholes. An example of this is the uncertainty surrounding what is considered 'electronic money' in terms of Regulation 32(2) of the Financial Intelligence Regulations.[9]

b) Unfeasible to Regulate the Technology Underpinning Cryptocurrencies

At present date, it is arguably not feasible to attempt to regulate the technology that underpins cryptocurrencies. As illustrated in chapters two and three, the technology is not flawless.[10] Although the FATF recommends that countries create methods to detect persons who are performing cryptocurrency transactions outside of the ambits of regulation.[11] It is argued that in order for such detection to be effective the technology would need to be regulated, which at present date is simply unfeasible.

Notably, in intellectual property law the 'graduated response schemes',[12] are recognised as a method of preventing copyright infringement on the internet through file sharing.[13] The monitoring and enforcement of online copyright infringement is done by the internet service provider.[14] Although these schemes are not shielded from criticism particularly for limiting a person's right to a fair trial,[15] a similar protocol may be implemented for internet service providers to monitor and report suspicious cryptocurrency transactions. But such protocol would need to overcome the safe harbour Namibia has given its internet service providers by

[8] In terms of criminal law, a person may not be tried or convicted for a 'crime' which was not a crime at the time it was committed, see Article 12(3) of the Constitution. See also Article 15 of the International Covenant on Civil and Political Rights. Therefore, cryptocurrency regulation should clearly provide for the criminalisation of unlawful acts performed or omissions with the use of cryptocurrencies. FAFT Recommendation op cit note 1 at 3 and 5 advises countries to criminalise the use of cryptocurrencies for money-laundering and terrorism financing and prescribe appropriate sanctions for the violation of such regulation in terms of Recommendation 4 and 35 of the FATF Recommendations op cit note 1.

[9] Financial Intelligence Regulations Government Notice 3 of 2015 made under the Financial Intelligence Act 13 of 2012 (Financial Intelligence Act).

[10] See Stan Higgins 'Coinbase CEO: Core Developers May Be Bitcoin's Biggest Systemic Risk (6 March 2016) *Coindesk* available at *https://www.coindesk.com/coinbase-brian-armstrong-risk-developers* accessed on 27 November 2019.

[11] FATF Recommendations op cit note 1 at Recommendations 16, 32 and 34.

[12] Caroline B Ncube 'Copyright Enforcement: The Graduated Response Takes Centre Stage' (2012) 24 *SA Merc LJ* 134.

[13] *Ibid.*

[14] *Ibid.*

[15] *Ibid.*

stating that they are under no general obligation to monitor internet activity.[16] And further overcome possible privacy infringement claims.[17] Accordingly, it is simply not feasible to attempt to regulate the technology at present.

The next part of this chapter focuses its attention on Namibia's regulation of cross-border cryptocurrency transactions. In chapter four the key features for the formulation of Namibia's regulation were discussed. Building on that discussion, the next hurdle is arguably the greatest one which entails an evaluation on how Namibia can ensure the efficacy of its cross-border cryptocurrency regulation.

c) Jurisdictional Concerns

While cryptocurrencies have proven themselves to be borderless, their regulation and subsequent enforcement is constrained to a certain geographical territory. Therefore, the fundamental requirement for cross-border cryptocurrency regulation is to address any possible jurisdictional challenges.[18] Once jurisdictional concerns are addressed the regulation will have legitimacy. Phrased differently, cross-border cryptocurrency regulation devoid of an effective jurisdictional provision will be futile. In order to appreciate the challenges cross-border cryptocurrency transactions pose to asserting jurisdiction it is imperative to first understand the legal principles surrounding jurisdiction.

In terms of public international law, jurisdiction is vital to a country exercising its monopolist authority within its geographical territory.[19] This authority is exercised by the government's three branches namely, the executive, legislative and judiciary branch. As such, the jurisdiction of a country takes three forms which is the authority to enact laws over natural and juristic persons[20] within its territory, this is known as 'prescriptive jurisdiction'[21] or 'legislative

[16] Paragraph 55 of the Electronic Transactions Bill [B. 2 - 2019].
[17] Article 13 of the Constitution.
[18] In earlier times, jurisdictional challenges arose in international law of the sea, particularly at the high seas where no country has monopolist jurisdiction. The law in this regard now provides all countries with prescriptive jurisdiction over the high sea. However, enforcement jurisdiction is limited to the countries whose ships are involved in a given dispute, see Donald R. Rothwell, Alex G. Oude Elferink and Karen N. Scott et al (eds) *The Oxford Handbook of the Law of the Sea* (2015) Oxford University Press 208-9.
[19] John Dugard SC et al *Dugard's International Law: a South African Perspective* 5 ed (2018) JUTA 210. This monopolist authority a country has within its geographical territory, which is most often exercised solely by such country, as provided for in Article 2(7) of the Charter of the United Nations. The Namibia's geographical territory is detailed in Article 1(4) of the Constitution. Zongwe has indicated that having a geographical territory is a fundamental consideration for sovereignty, Prince Zongwe *International Law in Namibia*. (2019). Oxford: African Books Collective 142.
[20] Anthony J. Colangelo 'What is Extraterritorial Jurisdiction' (September 2014) vol. 99 no. 6 *Cornell Law Review* 1310.
[21] *Ibid*. Dugard SC et al op cit note 19 at 211.

jurisdiction'.[22] While 'adjudicative jurisdiction'[23] or 'personal jurisdiction'[24] is the authority a country has over natural and juristic persons to bring them before its courts and make a formal judgment against them.[25] Whereas 'enforcement jurisdiction'[26] or 'executive jurisdiction'[27] which is the authority a country has to ensure compliance with its laws,[28] both in an administrative, civil and criminal context. All three of these forms of jurisdiction are essential for cryptocurrency regulation.

In Namibia, a court will have jurisdiction over matters that arose within its geographical territory.[29] In a civil matter this jurisdiction will be over persons who live or work,[30] or own property within the courts geographical territory that the court is able to attach[31] to assert its jurisdiction. Persons who fall outside the ambits of the court's jurisdiction may be subjected to it by written agreement.[32]

As Regulation 22 of the Exchange Control Regulations and s 63-5 of the Financial Intelligence Act attracts criminal liability for non-compliance, the discussion will now turn to evaluate the jurisdictional constraints in a criminal matter. A Namibian court will have jurisdiction over offences which were committed within the court's geographical territory,[33] as well as offences committed on its sovereign waters.[34] In addition, offences that commenced or ended in Namibia.[35] Moreover, a Namibian criminal court will have jurisdiction over an offence if at least one element of that offence took place within the court's jurisdiction.[36]

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[22] Colangelo op cit note 20 at 1310-11.
[23] Colangelo op cit note 20 at 1311.
[24] *Ibid*. Some countries seek to invoke the principle of 'active personality' to extend such country's personal jurisdiction over its citizen even when they are outside of the country's geographical territory, see TW Bennett & J Strug *Introduction to International Law* (2013) JUTA 50.
[25] Colangelo op cit note 20 at 1311.
[26] *Ibid.* Dugard SC et al op cit note 19 at 211.
[27] *Ibid.*
[28] *Ibid.* Colangelo op cit note 20 at 1311.
[29] As provided for in the Constitution Chapter 9. See also s 26(1) and s 28(1)(d) of the Magistrates' Courts Act 32 of 1944 (Magistrates' Courts Act).
[30] Section 28(1)(a) of the Magistrates' Courts Act, s 16 of the High Court Act 16 of 1990 (High Court Act). These matters can further be appealed or reviewed by the Supreme Court of Appeal in terms of s 2, s 14(1) and s 16(1) of the Supreme Court Act 15 of 1990 (Supreme Court Act).
[31] Section 30*bis* of the Magistrates' Courts Act.
[32] Section 45(1) of the Magistrates' Courts Act.
[33] Section 90(1) of the Magistrates' Courts Act, s 16 of the High Court Act. These matters can further be appealed or reviewed by the Supreme Court of Appeal in terms of s 2, s 14(1) and s 16(1) of the Supreme Court Act.
[34] Section 90(2)(d) of the Magistrates' Courts Act.
[35] Section 90(2)(e) of the Magistrates' Courts Act. Notably, in *S v Maseki* 1981(4) SA 374 (T) (*S v Maseki*) held that courts do not have jurisdiction over crimes committed outside of its jurisdiction. Neither crimes that were completed outside of its jurisdiction. The court did however confirm that there are a few exceptions in this regard, such as high treason.
[36] Section 90(4) of the Magistrates' Courts Act.

An illustration of the exercise of jurisdiction in a cross-border crime can be found in *S v Mwinga and Others*.[37] Where a shot was fired from the Namibian border[38] which then struck and subsequently killed a person in a canoe[39] on the Zambian side of the Zambezi river.[40] On appeal the Supreme Court of Appeal held that in order to confirm jurisdiction in a cross-border offence an inquiry must be made to determine whether the essential element of such offence took place within Namibia, in which case a Namibian court will have jurisdiction.[41]

When seeking to assert jurisdiction to a cross-border offence, countries must be mindful that they have equal sovereignty[42] and are therefore required to respect such sovereignty.[43] This is especially important to bear in mind when countries seek to exercise 'extraterritorial jurisdiction'[44] over another sovereign country. The instances when countries can apply extraterritorial jurisdiction are restricted to those instances provided for by international law.[45]

In the international criminal law context there are certain crimes[46] that are so grievous that they warrant the attention of the international community.[47] In such instances countries have the authority to adjudicate over accused persons,[48] regardless of their nationalities and the geographical territory where the offences were committed.[49] This principle is known as 'universal jurisdiction'.[50] The rationale behind universal jurisdiction is to ensure that persons

[37] *S v Mwinga and Others (SA 1/95) [1995] NASC 2 (11 October 1995) (S v Mwinga).*
[38] *S v Mwinga supra* at 12.
[39] *S v Mwinga supra.*
[40] *S v Mwinga supra*.
[41] *S v Mwinga supra* at 11.
[42] In term of Article 2(1) of the United Nations Charter.
[43] Article 2(4) and (7) of the United Nations Charter.
[44] 'Extraterritorial jurisdiction' occurs when a country exercises its jurisdictional powers, beyond its geographical territory, in another country, see Colangelo op cit note 20 at 1304.
[45] Dugard SC et al op cit note 19 at 210. See *S.S. Lotus (France. v. Turkey.),* 7 September 1927 PCIJ (Series A) No. 10 (*Lotus*) para 45, where the Permanent Court of International Justice held that extraterritorial jurisdiction may only be applied when it is legally permissible by international law. However, *Lotus supra* has been subjected to criticism, see Cedric Ryngaert *Jurisdiction in International Law* 2 ed (2016) 34.
[46] The International Court of Justice can adjudicate the crime of genocide, crimes against humanity, war crimes and the crime of aggression in terms of Article 5(a)-(d) of the Rome Statute of the International Criminal Court done in Rome on the 17 July 1998, in force on 1 July 2002, United Nations, Treaty Series vol. 2187 No. 38544, Depositary: Secretary-General of the United Nations.
[47] Bennett & Strug op cit note 24 at 56.
[48] *Ibid.*
[49] *Ibid*.
[50] Bennett & Strug op cit note 24 at 56. See *National Commissioner of the South African Police Service and Another v Southern Africa Human Rights Litigation Centre and Others* [2013] ZASCA 168.

who violate the law are held accountable,[51] especially when their countries fail to take action.[52] However, universal jurisdiction is reserved solely for prescribed international crimes.[53]

Due to the novelty of cross-border cryptocurrency transactions there is presently no established public international law principles that confirms when states can exercise their jurisdiction over offences that arise out of such transactions.

On the other hand, private international law seeks to resolve jurisdictional disputes with the 'choice of law'[54] principle. This principle involves taking one element of a cross-border transaction which gave rise to the dispute and 'localizing'[55] the entire transaction by creating a fiction that the entire cause of action arose within the selected jurisdiction. This assessment is done for the purposes of adjudication.[56] Of course, in private international law parties can exercise their autonomy with regards to jurisdiction, however for the purposes of this dissertation Namibia's regulation should prescribe the instances when it will have jurisdiction, as oppose to giving the parties the discretion.

The jurisprudence of asserting jurisdiction in cyber law is in its infancy stage and has attracted a great deal of academic attention.[57] Several countries have also sought to clarify the uncertainties surrounding cyber law jurisdiction.[58] Much like cloud computing[59] the cryptocurrency network that facilitates the cross-border transactions is reliant on the computer

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[51] Saidat Nakitto 'South Africa's Exercise of Universal Jurisdiction' (2014) vol. 3 no. 1 *International Human Rights Law Review* 158.
[52] *Ibid*.
[53] Bennett & Strug op cit note 24 at 56.
[54] Ruth Hayward *Conflict of Laws* 4 ed (2006) 1. Jonathan Hill and Máire Ní Shúilleabháin *Clarkson & Hill's Conflict of Laws* 5 ed (2016) 2.
[55] Colangelo op cit note 20 at 1313.
[56] *Ibid.*
[57] See Rudnick Gray Cary, Michael L. Rustad and Thomas H. Koenig (eds.) 'Harmonizing Internet Law: Lessons from Europe' (May 2006) vol. 9 no. 11 *Journal of Internet Law* 1-12. Dan Jerker B. Svantesson 'Jurisdictional Issues and the Internet –a Brief Overview 2.0' (2018) vol. 34 *Computer Law & Security Review* 715–722. Georgios I. Zekos 'Cyber-territory and Jurisdiction of Nations' (June 2012) vol.15 no.12 *Journal of Internet Law* 3-23. Damon C. Andrews & John M. Newman 'Personal Jurisdiction and Choice of Law in the Cloud' (2013) vol. 73 no. 1 *Maryland Law Review* 313-388. Burke T.Ward & Janice C. Sipior 'The Internet Jurisdiction Risk of Cloud Computing' (2010) vol. 27 *Information Systems Management* (334–339). Paul Timmers 'Challenged by "Digital Sovereignty"' (December 2019) 23 No. 6 J. *Journal of Internet Law* 1-12, and Max I Raskin 'Realm Of The Coin: Bitcoin And Civil Procedure' (2015) vol. xx *Fordham Journal Of Corporate & Financial Law* 969-1011.
[58] See Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters. See also Hague Conference Convention on Choice of Court Agreements of 30 June 2005. While the USA courts evaluate the activeness of a business' website which is accessible in its geographical territory to determine jurisdiction see *Zippo Mfg. Co. v. Zippo Dot Com*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).
[59] 'Could computing' is an arrangement where customers store their data on a service provider's serves, as oppose to storing such data on their own devices. The serves may be physically located in another country, see Dan Svantesson & Roger Clarke 'Privacy and Consumer Risks in Cloud Computing' (2010) vol.26 no.4 *Computer Law and Security Review* 391-2.

power of nodes physically located in various countries which gives rise to jurisdictional uncertainties. These uncertainties cannot be remedied with an attempt to impose 'data localisation'[60] restrictions, as this will prove to be futile due to the decentralised nature of the network.

A vital aspect of determining the competency of a country to exercise jurisdiction over a cross-border cryptocurrency offence or dispute is whether such state would be able to effectively impose criminal, civil or administrative sanctions on offenders or disputants, respectively. A regulation will be considered effective if it is applied to the majority of society and they adhere to it.[61] In terms of adjudication the test for effectiveness would be whether the court applies the regulation consistently and is able to enforce its judgment. Therefore, effectiveness requires an assessment of the reality of society's behaviour in relation to such regulation.[62]

The assessment of the validity of regulation, on the other hand, is more abstract, as it seeks to answer how 'ought'[63] the ideal society behave.[64] In terms of legal theory, the validity and effectiveness of any regulation is interlinked but not interchangeable.[65] As effectiveness is merely one of the conditions for such regulation to be consider valid.[66] For this reason, even if regulation is not effective it is still considered valid[67] until repealed. This dissertation argues that Namibia's regulation should not merely seek to be valid but also effective. It is at this juncture that the dissertation recognises that the proposed cryptocurrency regulation will only be partially effective, in that it will lack the ability to detect persons who continue to engage in cross-border transactions devoid of such regulation. As at this stage, it is ill-advice for Namibia to attempt to regulate the technology that would assist with such detection.

Nevertheless, Namibia should still regulate the licensed service providers and their users for the purpose of risk mitigation. In order to ensure the efficacy of regulation, in the absence of methods to detect users transacting outside of the proposed regulation, Namibia should

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[60] 'Data Localisation' can be understood as imposing regulations on where data is stored and sent, see Erica Fraser 'Data Localisation and the Balkanisation of the Internet' (December 2016) vol.13 no.3 *SCRIPTed* 360.
[61] Hans Kelsen *General Theory of Law and State* 3 ed (1949) Transaction Publishers 24. Hans Kelsen *Pure Theory of Law* 2 ed (1967) Berkeley: University of California Press 210. Hans Kelsen, 'On the Basis of Legal Validity' (1981) 26 *American Journal of Jurisprudence* 181.
[62] Hans Kelsen *General Theory of Law* op cit note 61 at 39-40. Hans Kelsen *Pure Theory of Law* op cit note 61 at 212.
[63] Hans Kelsen, *American Journal* op cit note 61 at 181.
[64] Hans Kelsen *Pure Theory of Law* op cit note 61 at 212.
[65] Hans Kelsen *General Theory of Law* op cit note 61 at 42.
[66] *Ibid*. Hans Kelsen *Pure Theory of Law* op cit note 61 at 213.
[67] Hans Kelsen *Pure Theory of Law* op cit note 61 at 209.

restrict its regulation to disputes and offences in which it can enforce its regulation by subsequent judgments or orders. Such instances are arguably when the offender resides, conducts their business and is licensed within Namibia's territory. As an additional precautionary measure, the license should also require service providers and their users to consent in writing to Namibia's jurisdiction. Namibia can also exercise jurisdiction when the offensive cryptocurrency is sent or received by a private cryptographic key which is licensed in Namibia. Therefore, the regulation must prescribe that cryptographic keys are linked to a Namibian bank account. For if regulators have access to the private cryptographic key,[68] they have access to the cryptocurrencies associated with such key.[69] And will thus be able to seize and forfeit such cryptocurrencies to the state which were used in contravention of the Exchange Control Regulations or Financial Intelligence Act, thereby giving such regulation efficacy.

d) Licensing Requirement

From a regulatory perspective, the purpose of licensing can be seen as a manner for regulators such as the Bank and the Centre to monitor and enforce compliance with their respective laws. In essence, the licensing of service providers and prescribing that users solely transact with a licensed service provider will bring them within the ambits of regulation and ensure risk mitigation.

In 2014 Eastern and Southern Africa Anti-Money Laundering Group (ESAAMLG)[70] conducted a benchmarking exercise to determine the regulatory framework in the currency exchange sector of their member states and came across the common three requirements for licensing: (1) fit and proper beneficial owners and principal employees,[71] (2) minimum capital requirements[72] and (3) the ability to comply with the law.[73] These requirements are similar in the banking sector. As the core requirements for licensing banks are: (1) minimum capital

[68] Raskin op cit note 57 at 978.
[69] *Ibid*.
[70] ESAAMLG has been associated with the FATF since 2010, it is a regional association that assists its members states with AML/CFT measures. Namibia is a member of ESAAMLG, see 'Typologies Report on Money Laundering and Terrorist Financing through the Money Remittance and Currency Exchange Sector in the ESAAMLG Region' (31 August – 6 September 2014) Luanda, Angola. FATF Website available at *https://www.fatf-gafi.org/pages/easternandsouthernafricaanti-moneylaunderinggroupesaamlg.html* accessed on 28 January 2020.
[71] ESAAMLG 'Typologies Report on Money Laundering and Terrorist Financing through the Money Remittance and Currency Exchange Sector in the ESAAMLG Region' (31 August – 6 September 2014) 10 para *(a)*.
[72] ESAAMLG op cit note 71 at 10 para *(b).*
[73] ESAAMLG op cit note 71 at 10 para *(c).*

requirements,[74] (2) risk management[75] and (3) the ability to comply with the law.[76] This dissertation proposes that the same licensing requirements should be transposed to cryptocurrency service providers in Namibia's cryptocurrency regulation and as such will be discussed at more length.

(i) Minimum Capital Requirements[77]

In order to ensure the solvency of the banking sector and the protection of their investors and depositors, the Bank imposes the minimum capital requirement. This requires commercial banks to at all times have more capital than its 'risk weighted assets'[78] or its overall debts[79] in order to ensure that at any given moment the commercial bank can extinguish its debts[80] and not require the Bank's assistance to satisfy such debts.[81] Sufficient capital forms part of the ultimate risk management assessment that is done on commercial banks.[82] The same capital requirement must be transposed to cryptocurrency service providers to safeguard their users.

(ii) Risk Management [83]

Ensuring the safety of deposits[84] is but one of the many risks the Bank assesses before licensing a commercial bank.[85] Ultimately, the Bank requires of commercial banks to have sufficient controls in place to ward off, or at the very least mitigate risks. Such mitigation ensures the stability of the financial industry and even more so the economy of Namibia. Due to their decentralised nature, cryptocurrencies are presently not affected by systemic risk factors.[86] But by way of licensing and thereby inclusion into the robustly regulated financial industry they

[74] In terms of s 9(1)(a), s 11(1)(c) read with s 28 of the Banking Institutions Act. Basel Committee on Banking Supervision 'Core Principles for Effective Banking Supervision' (15 December 2019) (Basel Committee Core Principles) 17, 42, 43, 50, 62, 66, 67.
[75] In terms of s 11(1)(i) of the Banking Institutions Act.
[76] In terms of s 11(1)(iA) of the Banking Institutions Act.
[77] In terms of s 9(1)(a), s 11(1)(c) read with s 28 of the Banking Institutions Act. Likewise, the Bank may determine the composition of that capital in terms of s 29 of the Banking Institutions Act. In terms of s 9(1)(a), s 11(1)(c) read with s 28 of the Banking Institutions Act. Basel Committee Core Principles op cit note 74 at 17, 42, 43, 50, 62, 66 and 67.
[78] Section 28(1)(b) of the Banking Institutions Act.
[79] Basel Committee Core Principles op cit note 74 at 19 and 63.
[80] Basel Committee Core Principles op cit note 74 at 19.
[81] In terms of s 32 of the Bank of Namibia Act.
[82] Basel Committee Core Principles op cit note 74 at 18.
[83] In terms of s 11(1)(i) of the Banking Institutions Act. Basel Committee Core Principles op cit note 74 at 17, 18, 42 and 43.
[84] Basel Committee Core Principles op cit note 74 at 19.
[85] Other risks include credit risks, legal risks, liquidity risks, concentration of risks, operational risks to name a few, see Basel Committee Core Principles op cit note 74 at 19-20.
[86] Panagiota Makrichoriti and Georgios Moratis 'BitCoin's Roller Coaster: Systemic Risk and Market Sentiment' (July 2016) 4. 'Systemic risk' can be understood as the considerable loss of assets by several entities within an industry or economy as a whole, see Dunia Prince Zongwe 'Conjuring Systemic Risk Through Financial Regulation by SADC Central Banks' (June 2011) *SADC Law Journal* 104.

may become too close to the banking sector. And the risks associated with cryptocurrencies, such as their volatility, which is not subject to the Bank's monetary policy strategies, may spill over and cause the downfall of the banking sector.

As the primary objective of all financial regulation is to ward off systemic risk,[87] Namibia's regulation for cross-border cryptocurrencies must therefore subject service providers to the same risk management requirements. At a policy level the greatest hinderance to the adoption of cryptocurrencies in Namibia is the assumption of risk by their users. Addressing such risks may accelerate their adoption.

(iii) The Ability to Comply with the Law[88]

In the banking sector an applicant commercial bank must satisfactorily display its ability to operationally comply with all relevant laws, particularly the Payment Systems Management Act, Financial Intelligence Act, Banking Institutions Act and the Exchange Control Regulations, already at the point of application. This part will now focus on the legal obligations in terms of the Financial Intelligence Act and the Exchange Control Regulations as emphasised throughout this dissertation.

One of the main reasons for regulating the banking sector is to ensure that it is utilised solely for legitimate purposes.[89] Therefore, AML/CFT laws are prescribed to ward off the misuse of commercial banks for illicit activities.[90] The FATF has advised countries to adopt a risk-based approach to the regulation of cryptocurrencies.[91] Consequently it recommends extending AML/CFT laws to cryptocurrency users and service providers[92] by licensing them.[93] And requiring competent regulators to ensure compliance with their AML/CFT obligations.[94] These obligations include preventative measures such as customer due diligence[95] and reporting of suspicious transactions.[96]

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[87] Dunia Prince Zongwe op cit note 86 at 102.
[88] In terms of s 11(1)(iA) of the Banking Institutions Act.
[89] Basel Committee on Banking Supervision Core Principles op cit note 74 at 16.
[90] Basel Committee Core Principles op cit note 74 at 14.
[91] In terms of Recommendation 1 of FATF Recommendations op cit note 1. FATF Guidance op cit note 1 at para 86.
[92] FATF Recommendations op cit note 1 at Recommendation 15. FATF Guidance op cit note 1 at 20.
[93] FATF Recommendations op cit note 1 at Recommendations 14-15.
[94] FATF Recommendations op cit note 1 at Recommendation 26-28.
[95] FATF Recommendations op cit note 1 at Recommendation 10. In terms of FATF Recommendation 13, service providers should do a due diligence on correspondent bank in a cross-border transactions.
[96] FATF Recommendations op cit note 1 at Recommendation 20.

FATF further advises jurisdictions to ensure that their regulations criminalise the use of cryptocurrencies for money-laundering and terrorism financing,[97] and to prescribe appropriate sanctions for violation of such regulations.[98] The FATF Recommendations also discourages transacting with a correspondent country with weak AML/CFT laws.[99] The EU has transposed the same obligation by prohibiting members states from facilitating cross-border cryptocurrency transactions with countries outside of the EU that have weak AML laws,[100] unless the member states are able to mitigate the risks associated with such transactions.[101]

In order to address jurisdictional concerns, the FATF recommends licensing a service provider in the country in which it is established.[102] Service providers that conduct cross-border transactions should also be licensed in the host countries.[103] Nevertheless, the FAFT encourages countries to assist each other in enforcing their regulations.[104] An illustration of this is South Korea, that engages in information sharing amongst international cryptocurrency service providers to subject cross-border cryptocurrency transactions to the law.

To ensure the integrity of its financial industry while preserving Namibia's foreign reserves, its cryptocurrency regulation should license all service providers who reside or conduct their business in Namibia. The licensed service providers should thereafter be subjected to the same legal obligations as ADs, in terms of the Exchange Control Regulations and accountable institutions in terms of the Financial Intelligence Act. Both commercial and non-commercial cryptocurrency transactions must be regulated by the proposed regulation. This wide scope of application differs from that of New York and the EU that have only licensed and supervised service providers for commercial purposes.[105] However, from a policy perspective Namibia needs to provide a different stance because it imposes capital and exchange controls on cross-border transactions. For Namibia's cryptocurrency regulation to ensure that the exchange of cryptocurrencies into money and *vice versa* does not deplete Namibia's foreign reserves or evade its capital and exchange controls, Namibia will need to

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[97] In terms of Recommendations 3 and 5 of the FATF Recommendations op cit note 1.
[98] FATF Recommendations op cit note 1 at Recommendation 35. In terms of Recommendation 4 this can include seizing, blocking and where appropriate confiscating cryptocurrencies.
[99] FATF Recommendations op cit note 1 at 14.
[100] The Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 (5th AML Directive) para 12.
[101] *Ibid.*
[102] FATF Guidance op cit note 1 at para 79.
[103] FATF Guidance op cit note 1 at para 81.
[104]FATF Recommendations op cit note 1 at Recommendations 37-40.
[105] In the EU 'service providers' are those institutions who exchange cryptocurrency and the custodians of private cryptographic keys, see 5th AML Directive op cit note 100.

proactively regulate cross-border cryptocurrencies in the same way it does money.[106] By prescribing that all cross-border cryptocurrency transactions outside of the CMA require the approval or exemption from the Bank before the transaction is facilitated.

This proactive regulation of cryptocurrencies can arguably only be done if licensed service providers are the sole custodians to users' private cryptographic keys. As in South Korea, Namibia should also link users' Namibian bank accounts to their private cryptographic keys, which will ensure that users transact under their legal names. The licensing of cryptocurrencies allows the Centre to place service providers under the same obligations as accountable institutions. Namibia's cryptocurrency regulations should also proscribe users from engaging in cross-border cryptocurrency transactions privately, as all cross-border cryptocurrency transactions sent or received by Namibia should be executed by a licensed service provider. Moreover, the regulation must require the conversion of cryptocurrencies into money and *vice versa* in Namibia, to be restricted to licensed service providers and their users. Finally, appropriate penalties should be imposed for failure to comply with the cryptocurrency regulation.

Thereby ensuring that cross-border cryptocurrency transactions that are sent or received in Namibia are transparent and accountable to the Bank and the Centre. The incentive for users and service providers to subject themselves to Namibia's cryptocurrency regulation is that they are able to transact with cryptocurrencies within the bounds of the protection offered by the law. And without fear of being criminally, civilly or administratively sanctioned for non-compliance. However, due to the nature of cryptocurrencies blockchain technology this form of regulation has its limitations, as users and service providers are still theoretically able to transact using cryptocurrencies devoid of Namibia's cryptocurrency regulation.

To conclude, this chapter proposed a multitiered regulatory framework to regulate cross-border cryptocurrency transactions. The framework included a model law at an international level, which would ensure harmonisation amongst countries, to avoid threat of regulatory arbitrage. And then continental and sub-regional integration of such model law. Thereafter, a national cryptocurrency regulation which seeks to mitigate risks that may arise from cross-border cryptocurrency transactions by licensing service providers and subjecting such service providers and their users to the obligations imposed by such license. Which includes the extension of the scope of the Financial Intelligence Act and the Exchange Control Regulations

[106] This provision is coherent with the principle of technological neutrality.

to cryptocurrency transactions that are sent or received in Namibia. The next chapter will recommend how to make this regulation feasible in Namibia.

VI. CHAPTER 6: RECOMMENDATIONS FOR IMPLEMENTATION OF REGULATION

Drawing from the discussions in the previous chapters, and the regulatory framework proposed in chapter five, this chapter will recommend how Namibia can implement its cross-border cryptocurrency regulations in the most effective manner.

As detailed above, Namibia robustly regulates its financial industry, and for the purpose of this dissertation emphasis was placed on how it regulates the movement of money in and out of the country. The primary purpose of the Bank regulating its sector in the financial industry is to ensure that Namibia remains solvent. Every economic policy deployed by the Bank is for this purpose, as the assurance of the value in Namibia's money stems from the fact that the Bank has the ability to extinguish its debts. This is made possible when the Bank has sufficient foreign reserves to not only extinguish debts but also shield its economy from any financial crisis. Namibia's foreign reserves can be seen as its safety net. Consequently, laws that keep this safety net intact are crucial and any threat thereto should be considered as critical.

This dissertation has displayed how cross-border cryptocurrency transactions can in theory circumvent Namibia's capital and exchange controls, when cryptocurrencies are converted into money it may cause an unsustainable appreciation of its economy. It was also displayed that when money is converted into cryptocurrencies and taken out of the country undetected it may cause a shortfall in its balance of payments and ultimately deplete the so-called safety net.

Moreover, it was further argued that the risks associated with cross-border transactions are exacerbated by decentralised borderless cryptocurrencies, void of regulation. And the law in Namibia is currently unresponsive to the reality of society's behaviour. This oversight is further worsened by the fact that users and service providers who seek to circumvent Namibian laws are aware that Namibia lacks the institutional capacity and technology to detect and monitor users and service providers outside of the proposed regulatory framework.

It is unfortunate that the regulatory framework in chapter five is to a large degree dependent on service providers and users voluntarily subjecting themselves to regulation. First, because by their very nature cryptocurrencies operate efficiently in the absence of regulation. Secondly, there is currently no way to effectively detect service providers and users who are transacting through Namibia devoid of such regulation. Consequently, this dissertation merely provided the first phase to mitigate the risks that cross-border cryptocurrency transactions pose

to Namibia's economy. The enhancement of the proposed regulation will come with the ability to detect service providers and users that are transacting outside of the regulation, as such detection is presently not possible.

While FATF has provided its member states with Recommendations and a Guidance on how to regulate cross-border cryptocurrency transactions to ensure the integrity of the financial industry. The reality is that such Recommendations and the Guidance are also limited by the fact that countries are unable to detect service providers and users who do not voluntarily subject themselves to licensing or registration.

Without ranking the importance of regulation that mitigates the risks associated with capital and exchange controls to that of AML/CFT laws, it is submitted that the proactive regulation of capital and exchange controls in itself requires ADs and ADLAs to conform with the essential elements of AML/CFT laws. These elements include knowing who the transacting parties are and where the money is going or coming from, before a transaction is facilitated. Therefore, despite international oversight in this regard the regulation of capital and exchange controls are equally as imperative as AML/CFT laws in terms of the regulation of cryptocurrencies.

Thus, it is recommended for Namibia to commence regulating cross-border cryptocurrency transactions for risk mitigation without delay. Ideally, this would first require international harmonisation to avoid regulatory arbitrage. Nevertheless, even in the absence of an international harmonised model law, Namibia can at present implement the regulatory framework detailed in chapter five for the purpose of risk mitigation.

Although the legal classification of cryptocurrencies as money in Namibia is imperative to the efficacy of the proposed regulation, it is submitted that the failure to classify cryptocurrencies as money in no way shields Namibia from the risks associated with cross-border cryptocurrencies nor does it make cryptocurrencies less attractive for criminal use. Therefore, it is recommended that to facilitate the regulation proposed in chapter five, Namibia should amend its definition of 'currency' to include cryptocurrencies in the Bank of Namibia 'Bill'. As well as any other reference to money or payment instrument in Namibian law. This would include and remedy the definition of 'electronic money' in the Financial Intelligence Act.

In addition, the Financial Intelligence Act should include cryptocurrency service providers as accountable institutions. Equally so, service providers must be licensed as ADs

for the purpose of the Exchange Control Regulations. Both the Financial Intelligence Act and the Exchange Control Regulations should criminalise the use of cryptocurrencies that evade their laws.

On the premise of the judgment in the *Shuttleworth* case, Namibia's parliament should amend the problematic s 9 of the Exchange Control Act, and thereby allowing for parliament to enact new Exchange Control Regulations. These new Regulations should establish the Bank as opposed to the Ministry of Finance, as the regulator of exchange and capital controls. This will avoid exposing Namibia to judicial scrutiny because of unlawful sub-delegation, which is a present threat under the current Exchange Control Regulations.

VII. CHAPTER 7: CONCLUSION

(a) Conclusion

This dissertation evaluated whether Namibia could regulate cross-border cryptocurrency transactions and concluded that it was possible to a certain degree. It proposed a regulatory framework for such cross-border cryptocurrency transactions. This was done by first evaluating the policy considerations for Sub-Saharan Africa to embrace the digital environment and its technologies to propel its economic growth. Therefore, advocating for the regulation of cross-border cryptocurrency transactions, as cryptocurrencies can theoretically lower the entry level to financial inclusion.

Thereafter, a comparative analysis between the centralised model of regulating cross-border transactions to that of the self-regulatory cryptocurrency network was conducted. This was done in order to determine whether there is a need to amend regulations to effectively address cross-border cryptocurrency transactions. The analysis revealed that the current regulations required amendments to effectively regulate cross-border cryptocurrency transactions. This was followed by evaluating the rationale for the implementation of AML/CFT laws as well as the rationale of capital and exchange controls.

A comparative analysis was conducted on selected countries to evaluate their present regulations to cross-border cryptocurrencies which informed the discussion on Namibia's proposed regulatory framework. This framework proposed a multitiered regulatory response, including a model law to ensure harmonisation amongst countries. Thereafter, Namibia's cryptocurrency regulation was discussed. This regulation required the licensing of cryptocurrency service providers and further subjecting their users also to the restrictions placed under such license, for both commercial and non-commercial cross-border cryptocurrency transactions. This dissertation argued that licensed service providers should be included as ADs and accountable institutions in terms of the Exchange Control Regulations and Financial Intelligence Act, respectively. Thereby bringing cross-border cryptocurrency transactions within their sphere of regulation.

Which in turn, addresses jurisdictional concerns and assists the Bank and the Centre to effectively implement their regulatory supervision to ensure the integrity of Namibia's financial sector and the preservation of its foreign reserves. This dissertation noted that the proposed regulation could be seen as the first phase to effectively regulating cross-border

cryptocurrency transactions in Namibia in the absence of a method of detecting users and service providers who do not voluntarily submit themselves to such regulation.

(b) Further Studies

Due to the limitations of this dissertation, not all of the relevant avenues could be explored at great length, therefore it is recommended that further studies should be conducted to;

(i) Determine a method of detecting when service providers are transacting in Namibia without a license or when users are transacting privately to or from Namibia, as recommended by FATF.[1] Academics have conducted studies of linking a user's internet protocol address to their private cryptographic key[2] in order to reveal their geographical location.[3] This may be useful for implementing detection methods. However, it raises privacy concerns that require further studies. As well as the fact that the newly passed Electronic Transaction 'Bill' does not place internet service providers under a general duty to monitor their customers.[4]

(ii) Further studies should be conducted to determine international principles to assert jurisdiction in cyber law to avoid each country making its claim for jurisdiction in the absence of internationally accepted principles.

[1] The Financial Action Task Force 'International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation' (June 2019) Recommendation 15 read with The Financial Action Task Force 'Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (June 2019) paras 83-4.
[2] Juhász PL et al 'A Bayesian approach to identify Bitcoin' (13 December 2018) *PLOS ONE* at 18.
[3] *Ibid*
[4] Paragraph 55 of the Electronic Transaction 'Bill'.

POSTSCRIPT NOTE:

At the time of finalising this dissertation Namibia had passed the Bank of Namibia Bill (Bill) and it had subsequently been gazetted on the 4th February 2020,[5] awaiting a commencement date from the Minister of Finance. Although the 'Bill's' definition of currency excludes cryptocurrencies from the legal classification of money in Namibia, this dissertation still maintains its position that cryptocurrencies should be considered as money for the reasons cited above.

[5] Government Gazette No. 7109.

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